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This Issue in Brief

The labor problems of Korea have international implications of importance to the economic and social situation in the Far East. In this connection an article on page 26 discusses the progress of industrialization in Korea, the wages, working conditions, and education of the workers, the labor movement, labor unrest, and agrarian developments. While at present Koreans own far more land in Korea than the Japanese, there is a tendency toward the passing of the land into the hands of the latter. In some sections of the country poverty seems to be increasing.

There were 974 credit unions in the United States in 1929, compared with 284 unions in 1925. During the same period the membership increased from 107,779 to 264,908. Their resources during this period increased from $10,706,099 to $24,065,407. In 1929, the loans granted by these societies reached the sum of more than $60,000,000. Page 1.

Unemployment in foreign countries shows a continued and marked increase, according to the latest official statistics. The increase in unemployment in Germany and Great Britain amounted to approximately 100 per cent between September, 1929, and September, 1930. It has been as great or greater for Belgium, Canada, Czechoslovakia, Finland, France, the Netherlands, Poland, Rumania, and Switzerland. In less industrialized countries, namely, Denmark, Estonia, Latvia, and Yugoslavia, unemployment is not reported as increasing. Page 37.

Average earnings and average full-time working hours per week in the cotton-goods manufacturing industry were practically the same in 1926, 1928, and 1930, according to surveys made by the Bureau of Labor Statistics for these years. The study for 1930 (p. 164) showed average earnings per hour, for all occupations combined, of 32.5 cents as compared with 32.8 in 1926 and 32.4 cents in 1928, the corresponding weekly figures being $17.36, $17.48, and $17.30, respectively. Average full-time hours per week were 53.4 in both 1930 and 1928, and 53.3 in 1926.

Average earnings in the dyeing and finishing of textiles were found by the Bureau of Labor Statistics to be 45.2 cents per hour and $23.01 per week in 1930, for all occupations combined. For males the averages were 47.3 cents per hour and $24.12 per week, and for females, 33.5 cents per hour and $16.92 per week. Full-time hours per week averaged 51 for males and 50.5 for females, the average for the industry as a whole being 50.9. Page 169.

Union wage rates in time-work trades in 1930 were on the average higher than in any preceding year, and the reduction in regular hours of labor from year to year has been almost as continuous as the increase in wage rates. Of 72 individual trades surveyed by the Bureau of Labor Statistics, 47 showed increases in average hourly wages on May 15, 1930, as compared with 1929, and 24 showed decreases,

1 showing no change. The average hourly rate in 1930 for all trades covered was $1.25 as compared with $1.204 in 1929. Average working hours per week were 43.9 in 1930 as compared with 44.8 in 1929. The building trades, in which the 5-day week is growing rapidly, had the shortest average full-time working week (41.9 hours) and teamsters and drivers the longest (53.7 hours). Page 176.

Adequate training of physicians in the diagnosis and treatment of industrial diseases has been advocated for some time by the International Association of Industrial Accident Boards and Commissions. A special committee of that organization reported at the latest annual meeting of the association upon a proposed curriculum to be instituted in medical schools and colleges throughout the country. The course of study outlined by the committee is divided into two parts, one planned to give all students at least some training in the occupational disease problem, the other designed for a special intensive course for post-graduate students. Page 88.

The total cost of industrial accidents in the United States is estimated at about $5,000,000,000 a year. This estimate is based on the assumption that the indirect cost is four times as great as the compensation and medical payments. The annual number of lost-time accidents in industry is placed at 3,000,000, of which about 25,000 are fatal, and additional minor injuries at 87,000,000. Page 72.

The Electrical Workers' Union is making rapid progress in providing old-age pensions, disability benefits, and life insurance for its members through agreements with employers' associations in the electrical-construction industry. The Labor Review for February, 1930 (p. 10), made note of two such agreements, one in St. Louis and the other in New York City. Recently similar agreements have been made by the local unions of electrical workers in Baltimore, Chicago, Cleveland, Denver, Kansas City (Mo.), Pittsburgh (Pa.), Tulsa (Okla.), and San Antonio (Tex.), Page 105.

The existing legal restrictions upon the employment of minors in dangerous occupations or industries are reviewed in an article beginning on page 53.

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Credit Union Movement in the United States in 1929[1]

FOR the average wage earner, with no banking connections and no security to offer, but urgently in need of money, the credit union appears to offer an ideal solution of the credit problem. Such a person can rarely obtain help from the ordinary banking institutions. Of recent years a small and increasing number of banks have added "character loans" to their field, but these are too few and scattered to form a considerable factor. In spite of these and the remedial loan organizations, the bank, as an institution, has not reached the great body of persons with small incomes. In times of financial stress, most of these persons know of only two avenues of relief—charity and the loan shark.

The credit union, however, appears to be a very successful means of meeting this situation. It is primarily for that small borrower whose need is greatest. It not only offers a welcome avenue of credit but has an enviable record of promotion of thrift. Through the establishment of habits of regular saving—small though the savings may be—it turns thriftless, creditless, and moneyless persons into saving, stable members with good standing in the community.

Only members of the credit union are eligible to obtain loans from it, but once a member, the applicant can obtain whatever sum he needs, at a low rate of interest. As a borrower from the credit union he is neither an exploited victim nor an object of charity. The transaction is on a strictly business basis. All members are on the same level, with the same rights and powers, and receive the same treatment.

The cooperative credit society is thus absolutely democratic. It is filling a real need, through simple machinery, and is doing this at very little cost (expense of operation during 1929 averaged only 1.79 per cent of the total loans granted).

The bureau's study indicates that credit societies are generally successful and that losses from failure of borrowers to repay loans are extremely small.

The effectiveness of these societies as "poor men's banks" is indicated by the growth of the movement, shown by data collected as part of the bureau's general study of the cooperative movement. In

[1] This is the fourth of a series of articles on the cooperative movement in the United States in 1929. The previous articles were given in the Labor Review, as follows: Wholesale societies, May, 1930 (pp. 108–110); gasoline filling stations, September, 1930 (pp. 11–18); and consumers' societies, October, 1930 (pp. 21–34).

1925, when the bureau's previous study was made, there were only 284 societies of this type in existence; by the end of 1929 the number had risen to 974. During the same period the membership has increased from 107,779 to 264,908. Their resources have more than doubled—the paid-in share capital has grown from $10,706,099 to $24,065,407 and the reserves from $973,873 to $2,079,450; the savings deposited with these societies have increased from $4,700,768 to $9,017,786. During the year 1929 the loans granted by these societies to their members reached the sum of more than $60,000,000.

Number and Age of Credit Unions Reporting

THE data regarding the credit societies were gathered by the questionnaire method in all cases except those in the States of Iowa, Massachusetts, Michigan, Minnesota, Missouri, and New York. In those States data on substantially the same points as covered by the present study are collected and published by the State officials in charge of the banking department, and in such cases the information was obtained from these officials, in order to avoid duplication of work.

It should be borne in mind that the data are as of December 31, 1929. The bureau has record of numerous societies started since January 1, 1930, but such were of course omitted from this study.

As the table below shows, of the 974 credit unions known to have been in existence at the end of 1929, the bureau has data for 838, or 86 per cent.

The distribution of credit unions, by States, is shown in Table 1.

TABLE 1.—NUMBER OF CREDIT UNIONS IN OPERATION AT END OF 1929 AND NUMBER REPORTING FOR THAT YEAR, BY STATES

State	Total number	Number reporting	State	Total number	Number reporting	State	Total number	Number reporting
Alabama	39	23	Louisiana	6	5	Oregon	3	3
Arizona	2	1	Maine	2	1	Pennsylvania	2	1
Arkansas	3	1	Maryland	3	3	Rhode Island	13	9
California	19	16	Massachusetts	299	299	South Carolina	5	1
Colorado	2	1	Michigan	29	20	Tennessee	15	12
Connecticut	1	1	Minnesota	43	43	Texas	12	4
District of Columbia	1	1	Missouri	43	43	Utah	5	4
Florida	1	1	Montana	1	1	Virginia	30	18
Georgia	39	39	Nebraska	7	5	Washington	6	6
Illinois	41	32	New Hampshire	3	2	West Virginia	9	6
Indiana	32	19	New Jersey	11	7	Wisconsin	14	9
Iowa	36	36	New York	125	125			
Kansas	10	9	North Carolina	46	21	Total	974	838
Kentucky	10	8	Ohio	3	2			
			Oklahoma	3	-------			

The cooperative credit movement continues to grow at a pace far in excess of that shown by the other phases of the cooperative movement. The passage of credit union laws in the various States has given a great impetus to the movement, but undoubtedly the very simplicity of the credit union plan has been one of the greatest factors in this growth.

Of the 756 societies for which data are available as to year of organization, less than 6 per cent were formed prior to 1916. In the 9-year period 1916 to 1924, 190 credit unions (25 per cent) were

started, mainly in the old credit union States of Massachusetts and New York. In the five years 1925 to 1929, 522 societies (69 per cent of the total) were formed. In this last period, however, while the cooperative credit movement continued to grow in Massachusetts and New York (but especially the former), much of the development was due to organization in States in which new credit laws had just been enacted for the first time. Of the 522 societies formed during the 5-year period, 283 were in States in which cooperative credit was a new thing.

Membership

RESTRICTIONS of some sort upon the membership are very common among credit unions. In many cases the restriction is imposed by the credit union law of the State.[2] A common provision of the law is that the membership of a credit union shall be limited to a group having a common bond of occupation or association, or to persons residing within a well-defined neighborhood, community, or rural district. This is done in order that the credit union group may be composed of persons of like interests. It is desirable, for the sake of financial safety, that the members in a credit union know each other and have common interests, and such membership restrictions are made to insure this homogeneity.

Some interesting data were collected as regards membership. No information could be had on this point for the credit unions in the six States for which data were obtained through the States officials. The reports for 280 credit unions in the other States show the following:

TABLE 2.—MEMBERSHIP RESTRICTIONS OF 280 CREDIT UNIONS

Membership restricted to—	Number of societies	Membership restricted to—	Number of societies
Employees of specified company:		Members of specified labor organizations:	
Mining companies	4	Railway clerks	22
Railroads	40	Machinists	2
Railroads (shop employees)	5	Electrical workers	1
Railroads (office employees)	2	Street-railway employees	1
Railway-express companies	5		
Street railways	3	Total	26
Telephone and telegraph companies	7		
Power and light companies	4	Specified occupations:	
Department stores	4	Railway mail employees	5
Mail-order companies	2	Farmers	2
Newspapers	2	Telephone workers	1
Motion-picture studio	1		
Milk company	1	Total	8
Insurance company	1		
Manufacturing companies—		Residents of specified locality	6
Cotton goods	2	Other, miscellaneous restrictions	9
Other	10	No restriction	9
Other companies, business not known	10		
		Grand total	280
Total	103		
Federal employees	108		
Municipal employees:			
Teachers	3		
Firemen	4		
Other	4		
Total	11		

[2] Of the 32 States which have passed credit union legislation, only 15 (California, Georgia, Indiana, Kentucky, Maryland, Massachusetts, Nebraska, New Hampshire, North Carolina, Oregon, Rhode Island, Tennessee, Utah, Virginia, and Wisconsin) place no limitation upon the field from which the credit union membership may be drawn.

The same data, arranged according to occupational distribution, as far as known, are shown in the table below:

TABLE 3.—OCCUPATIONAL DISTRIBUTION OF CREDIT UNION MEMBERSHIP

Membership restricted to—	Number of societies	Membership restricted to—	Number of societies
Mine workers	4	Mercantile employees	6
Railroad employees (including railway-express employees)	74	Newspaper employees	2
Street-railway employees	4	Machinists	2
Telephone and telegraph employees	8	Farmers	2
Municipal employees:		Factory employees	12
Teachers	3	Other industrial employees	10
Firemen	4	Miscellaneous employments	4
Other	4	Total	242
Federal employees:			
Post-office employees (including railway-mail employees)	75		
Other	28		

The 828 credit unions which gave data as to the number of members had an aggregate membership of 264,908, an average of 320 members per society. The data by States are shown in the table below. It is seen that, of the States having more than one credit union, the New Hampshire societies have the largest average membership, those of Maine and Rhode Island being next in size.

TABLE 4.—AGGREGATE AND AVERAGE MEMBERSHIP OF CREDIT UNIONS, DECEMBER 31, 1929, BY STATES

State	Number of societies reporting	Members		State	Number of societies reporting	Members	
		Total number	Average per society			Total number	Average per society
Alabama	23	2,263	98	Montana	1	150	150
Arizona	1	49	49	Nebraska	5	737	147
Arkansas	1	26	26	New Hampshire	2	4,042	2,021
California	16	3,079	192	New Jersey	7	2,937	420
Colorado	1	459	459	New York	125	70,598	565
Connecticut	1	277	277	North Carolina	21	1,136	54
District of Columbia	1	580	580	Ohio	2	276	138
Florida	1	226	226	Oregon	3	1,120	373
Georgia	39	7,029	180	Pennsylvania	1	52	52
Illinois	32	8,230	257	Rhode Island	9	9,062	1,007
Indiana	19	3,864	203	South Carolina	1	98	98
Iowa	27	2,723	101	Tennessee	12	2,407	201
Kansas	9	537	60	Texas	4	247	62
Kentucky	8	1,342	168	Utah	4	443	111
Louisiana	5	1,215	243	Virginia	18	5,984	332
Maine	1	1,286	1,286	Washington	6	895	149
Maryland	3	831	277	West Virginia	6	1,591	265
Massachusetts	299	107,044	358	Wisconsin	9	1,697	189
Michigan	20	3,963	198				
Minnesota	43	8,943	208	Total	828	264,908	320
Missouri	42	7,470	178				

Resources

EACH new member is required to pay a membership fee, ranging in the various societies from 10 to 25 cents, and to subscribe for a certain amount of share capital, usually one share.

The shares are always of small denomination—$5, $10, and $25 are the most common values—and the member is allowed to pay for his share in installments of as little as 10 or 25 cents a week. Thus it is evident that no one is debarred from membership by reason of poverty.

In order to equalize to some extent the members' holdings in the society, many organizations place a limit on the amount of stock held by any one member. In some organizations no member may own more than 5 per cent of the total share capital. In others placing a definite limit on the member's capital investment, the maximum amount allowed per member ranges from $100 to $5,000. While the societies studied have an aggregate paid-in share capital of more than $24,000,000, Table 5 shows that the amount of capital per member averages $92.

TABLE 5.—AVERAGE PAID-IN SHARE CAPITAL PER MEMBER OF CREDIT UNIONS BY STATES

State	Average capital per member [1]	State	Average capital per member [1]	State	Average capital per member [1]
Alabama	$45	Louisiana	$30	Oregon	$42
Arizona	131	Maine	33	Pennsylvania	3
Arkansas	61	Maryland	34	Rhode Island	63
California	36	Massachusetts	96	South Carolina	50
Colorado	102	Michigan	60	Tennessee	87
Connecticut	133	Minnesota	37	Texas	19
District of Columbia	24	Montana	20	Utah	35
Florida	144	Nebraska	21	Virginia	35
Georgia	47	New Hampshire	11	Washington	66
Illinois	52	New Jersey	34	West Virginia	36
Indiana	66	New York	143	Wisconsin	98
Iowa	40	North Carolina	32		
Kansas	12	Ohio	19	Total	92
Kentucky	63				

[1] Based on societies which reported both membership and capital.

The matter of receipt of deposits is usually fixed by the State law. The laws of all but seven States [3] specifically allow credit unions to receive savings deposits from the members, and those of seven States (Georgia, Kentucky, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia) also allow them to receive deposits from nonmembers.

Deposits may be made in amounts as small as 25 cents. These deposits, in the societies reporting, total more than $9,000,000.

In addition a certain amount must be set aside as a reserve or "guaranty fund" each year. The societies reporting have reserves of more than $2,000,000.

Table 6 shows the amount of capital, reserves, and deposits at the end of 1929.

[3] Nebraska and Wisconsin have no provision on the subject. The law of California is indefinite, authorizing the credit union to "receive money and accumulate funds to be loaned." The laws of Illinois, Kansas, Louisiana, and Missouri classify as "deposits" the sums being paid in by members on the purchase of shares.

TABLE 6.—SHARE CAPITAL, RESERVES, AND DEPOSITS OF CREDIT UNIONS IN 1929, BY STATES

State	Share capital		Guaranty fund		Deposits			
	Number of societies reporting	Amount	Number of societies reporting	Amount	Number of societies receiving	Number of depositors	Amount of deposits	Average per depositor[1]
Alabama	23	$100,798	22	$2,222	7	102	$4,071	$40
Arizona	1	6,302	1	28	1	11	1,232	112
Arkansas	1	1,588	1	47	1	20	90	5
California	16	111,958	12	2,616	5	338	8,001	24
Colorado	1	46,970						
Connecticut	1	36,719	1	619				
District of Columbia	1	13,891	1	270	1	4	118	30
Florida	1	32,500						
Georgia	39	333,106	39	14,826	39	2,055	52,816	32
Illinois	31	430,841	31	11,651	[2] 2	[2] 745	[2] 38,933	[2] 52
Indiana	19	256,836	16	11,451	12	983	41,051	42
Iowa	36	119,047	36	1,325	36	([3])	1,402	
Kansas	9	6,465	4	48	[2] 2	[2] 7	[2] 101	[2] 14
Kentucky	8	84,700	7	3,729	3	34	5,184	152
Louisiana	5	36,994	4	1,627	[2] 2	[2] 447	[2] 1,395	[2] 3
Maine	1	42,148	1	13,253	1	524	15,536	30
Maryland	3	28,168	2	148				
Massachusetts	299	10,261,960	299	741,772	299	32,455	4,296,253	132
Michigan	20	237,258	9	5,331	15	1,072	40,078	37
Minnesota	43	327,450	43	11,062	43	2,823	206,991	73
Missouri	([3])	([3])	43	5,285	([3])	([3])	([3])	
Montana	1	3,000	1	2,500	1	105	5,000	48
Nebraska	5	15,725	5	449	[4] 5	[4] 232	[4] 20,093	[4] 87
New Hampshire	2	43,776	1	28,334	1	4,000	1,504,790	376
New Jersey	4	20,500	6	4,990	4	2,625	217,877	83
New York	125	10,091,638	125	1,094,931	125	([3])	686,138	
North Carolina	21	36,048	19	4,355	17	671	77,105	115
Ohio	2	5,278	2	58				
Oregon	3	47,296	3	875	1	2	96	48
Pennsylvania	1	180	1	13				
Rhode Island	9	567,319	9	80,134	7	7,341	1,443,138	197
South Carolina	1	4,851	1	460	1	1	2	2
Tennessee	12	209,122	11	6,133	4	36	1,565	43
Texas	4	4,775	4	165	1	2	9	5
Utah	4	15,701	4	265	1	12	138	12
Virginia	18	207,669	14	10,470	10	1,435	18,778	13
Washington	6	58,700	6	1,751				
West Virginia	6	57,992	5	1,587	4	15	3,970	265
Wisconsin	8	160,138	9	14,670	[4] 3	[4] 710	[4] 325,835	[4] 459
Total	790	24,065,407	798	2,079,450	654	58,807	9,017,786	143

[1] Based on societies reporting both deposits and number of depositors.
[2] Covers only sums paid in on purchase of shares.
[3] No data.
[4] Probably covers sums paid in on purchase of shares, as State law does not authorize the receipt of savings deposits.

Requirements for Loans

ONLY a member of the credit union can be a borrower from it, and even a member can not secure a loan (1) if he is not in good standing, (2) if he has failed to repay any previous loan or is in arrears on a current loan, or (3) if his indorsers have ever had to pay any of his obligations.

Any member desiring to secure a loan must make his application therefor in writing, stating the purpose for which he intends to use the money and what security, if any, he can offer. Some societies also require that the applicant shall certify that "no consideration has passed or will pass from the borrower to the indorsers for their indorsement."

Practice in regard to security required differs in the various credit unions. One or two societies have a rule that no loans may be made without security. In the majority, however, loans on character may be made in amounts up to $25 or $50 (usually $50); for loans above that amount security must be given. The security

may be a note indorsed by one or more fellow members. A surrender to the society of the borrower's share capital may also be required as security.

The loan must have the approval of all the members of the credit committee present at the meeting to consider the loan and these usually must constitute at least two-thirds of the full committee. In many societies, an unsuccessful applicant for a loan may appeal from the committee to the board of directors or to a meeting of stockholders.

Loans may be made in many societies "only for provident purposes or urgent needs," or when they "promise to be of benefit to the borrower."

Business Done (Loans Granted) During 1929

THE following table shows that during 1929 the credit unions reporting made loans amounting to $60,283,353, and had outstanding at the end of the year $30,811,582. The average amount granted per loan was $39.

TABLE 7.—LOANS GRANTED BY CREDIT UNIONS DURING 1929, AVERAGE AMOUNT OF LOAN, AND AMOUNT OUTSTANDING AT END OF YEAR

State	Number of societies reporting	Number of borrowers in 1929	Loans granted during year		Loans outstanding at end of year
			Amount	Average loan per borrower [1]	
Alabama	23	[2] 2,615	[1 2] $235,234	$90	$98,528
Arizona	1	146	6,831	45	6,533
Arkansas	1	35	4,049	45	1,578
California	16	1,774	208,520	118	115,827
Colorado	1	618	131,277	212	80,710
Connecticut	1	340	150,320	102	34,677
District of Columbia	1	873	30,252	14	12,630
Florida	1	180	40,000	172	32,000
Georgia	21	4,339	537,109	124	258,988
Illinois	32	5,555	863,306	155	435,592
Indiana	19	[3] 1,917	285,849	102	138,790
Iowa	36	1,406	[4] 170,755	133	93,781
Kansas	8	126	7,659	61	5,871
Kentucky	8	931	176,696	190	107,362
Louisiana	5	1,122	91,772	82	38,560
Maine	1	762	104,361	137	78,253
Maryland	3	350	27,888	80	21,644
Massachusetts	299	52,853	[5] 29,500,000	[5] 558	12,628,949
Michigan	20	[6]	372,392	--------	[6]
Minnesota	43	3,896	[6]	--------	472,570
Missouri	43	10,335	[6]	--------	[6]
Montana	1	23	7,500	326	3,500
Nebraska	5	463	66,252	143	35,906
New Hampshire	2	4,014	144,612	36	1,343,664
New Jersey	7	[7] 980	130,194	119	52,783
New York	125	41,792	[5] 24,600,000	[5] 589	11,532,531
North Carolina	21	1,159	[5] 129,395	116	115,710
Ohio	2	121	9,580	79	5,067
Oregon	3	1,981	107,073	54	47,654
Pennsylvania	1	10	175	18	150
Rhode Island	9	2,918	679,936	233	1,886,364
South Carolina	1	72	10,668	148	5,560
Tennessee	12	[9] 1,787	476,794	210	237,117
Texas	4	93	5,257	57	4,088
Utah	4	349	36,050	103	17,337
Virginia	17	5,498	510,348	93	263,275
Washington	6	766	51,488	67	62,603
West Virginia	6	855	[10] 107,442	139	63,370
Wisconsin	9	880	266,319	303	472,060
Total	818	[11] 153,934	[12] 60,283,353	39	30,811,582

[1] Based upon societies reporting both number of borrowers and loans granted.
[2] 22 societies.
[3] 18 societies.
[4] 27 societies.
[5] Estimated.
[6] No data.
[7] 6 societies.
[8] 20 societies.
[9] 11 societies.
[10] 5 societies.
[11] 794 societies.
[12] 720 societies.

Interest on Loans

THE maximum rate of interest that may be charged on loans is fixed by the laws of 26 of the 32 States having credit union laws.[4]

The most common rates charged are 6, 8, and 12 per cent. The following statement shows, for the 278 societies reporting on this point, the rate charged:

	Number of societies
5 per cent per annum	1
5 per cent per annum, in advance	2
5½ per cent per annum	1
5 and 6 per cent per annum	[5] 2
5–7 per cent per annum	1
6 per cent per annum	63
6 per cent per annum, in advance	5
6 and 7 per cent per annum	[6] 1
6–12 per cent per annum	1
6 and 12 per cent per annum	1
7 per cent per annum	8
7 and 8 per cent per annum	[7] 4
7, 7½, and 8 per cent per annum	[8] 1
8 per cent per annum	32
8 and 10 per cent per annum	[8] 1
8, 10, and 12 per cent per annum	1
0.8 per cent per month	1
9 per cent per annum	3
¾ per cent per month	2
10 per cent per annum	5
Up to 11.2 per cent per annum	1
12 per cent per annum	[9] 139
18 per cent per annum	1
Total reporting	[10] 277

Operating Expenses

THE expense of operation of the credit societies as a group is very small. In many cases, where the credit union membership is composed of the employees of a single firm, the company gives quarters (including, of course, heat and light) and in some cases the services of an accountant. Often, when the society is small there are no official headquarters, the business being transacted at the home of the treasurer, secretary, or some member of the credit committee. Expense for salaries is at a minimum, for usually the directors and members of committees receive no compensation,[11] and as a general thing the only persons receiving any salary are the treasurer or

[4] Thus, in North Carolina the legal rate may be charged and in New Hampshire not to exceed the legal rate. In South Carolina the interest rate may not exceed 7 per cent, in Indiana 8 per cent per year "not collectible in advance," in Texas 10 per cent, and in Utah 12 per cent. In 17 States the rate may not exceed 1 per cent, in West Virginia 1¼ per cent, and in Virginia 1½ per cent per month, computed on the unpaid balances. The New Jersey law also provides that "no charges, bonus, fees, expenses, or demands of any nature whatsoever other than as above provided shall be made upon loans or advancements except upon the actual foreclosure of the security or upon the entry of judgment." In New York the interest may not exceed 1 per cent per month, or 5.9 per cent per year, if deducted in advance, and in either case must be inclusive of all charges incident to the making of such loan; if the member pays off a loan before due, "the pro rata unearned portion of interest shall be refunded." The Wisconsin statute provides that a rate of 1 per cent per month on unpaid balances "shall not be held to be usurious."

[5] In 1 case, according to whether mortgage or personal loan; in the other, according to term and size of loan.

[6] According to whether an installment or straight-term loan.

[7] In 1 case, according to size of loan.

[8] According to size of loan.

[9] One of these charges 7 per cent for straight-term loans.

[10] Not including 1 society whose charges range from 25 cents a month to 10 per cent per annum, according to size and type of loan.

[11] In 29 States compensation to them is forbidden by law.

secretary (or both). For this reason, the table below gives the average rate of expense for each item, based, first, on only those societies which had an expenditure for the particular item, and second, on the whole number of societies (135) which furnished statements of operating expenses. As is seen, of the 135 societies only 2 showed expenditure for heat and light and only 5 societies paid rent. Stationery and supplies formed the most common item of expenditure.

Table 8 shows that the expenses of credit unions for the year 1929 averaged 1.79 per cent of the year's business, i. e., the loans granted.

TABLE 8.—OPERATING EXPENSES OF CREDIT UNIONS IN 1929

Item	Rate (per cent) each item formed of total loans granted during year		
	Based on societies having specified expense		Based on 135 societies reporting
	Number	Average	
		Per cent	*Per cent*
Salaries	73	1.10	0.91
Stationery and supplies	125	.20	.16
Rent	5	.17	.01
Heat, light and power	2	.13	.01
Insurance, taxes, and fee for State auditing	52	.59	.24
Premium on employees' bonds	88	.03	.02
Interest on borrowed money	26	.33	.05
Repairs	2	.50	.04
Depreciation	5	.32	.04
Bad debts	10	.25	.04
Miscellaneous	67	.45	.25
Total	135	1.79	1.79

Only 10 societies reported any losses due to the failure of borrowers to repay loans. For the societies which incurred these losses they amounted to one-fourth of 1 per cent of the year's loans; for all the 135 societies they amounted to only 0.04 per cent. The director of the department of remedial loans of the Russell Sage Foundation recently cited the case of one of the large credit unions in New York City which has 11,000 members, and which during its 14 years' existence made loans aggregating some $12,000,000 and has in all that time lost only $40 in bad debts.[12]

Division of Profits

PROVISION for reserve or "guaranty fund," or both, is almost universally made, being required by all the recent laws, the most general amounts set aside for this purpose annually being 20 or 25 per cent of profits. This continues until an amount has been accumulated equal to that proportion of the share capital (or deposits) required by the State law. To this fund are also added the entrance fees, fines, and transfer fees.

Losses from bad debts or other causes are charged against the reserve. One society provides that the reserve is to be kept to take care of depreciation or for emergencies in connection with the business or for any expansion or development that the members see fit.

[12] American Bankers' Association Journal (New York City), July, 1930, pp. 43 et seq. : Small Loan Cooperatives, by Rolf Nugent.

Several credit unions allow the reserve, when it exceeds a certain amount, to be drawn upon for the relief of individual members "in cases of extreme urgency, such as sickness or death necessities."

Deposits receive interest at a fixed rate, usually determined by the board of directors. Of the 299 credit unions which reported on this point, 148 receive no deposits, while the rates paid on deposits by the remainder are shown below:

	Number of societies		Number of societies
2 per cent	2	7.5 per cent	1
3 per cent	12	8 per cent	4
3.5 per cent	2	8.4 per cent	1
4 per cent	64	8.6 per cent	1
4.5 per cent	8	9 per cent	1
5 per cent	31	10 per cent	1
6 per cent	18		
7 per cent	4	Total	151
7.2 per cent	1		

Dividends.—After expenses are paid and provision made for reserve, interest on deposits, etc., the remainder of the profit is divided among the members in proportion to the stock held by them.

Of the 820 societies for which reports were received, 386 paid dividends on the 1929 business. The amounts returned by these aggregated $220,250. It should be borne in mind that a very large proportion of the societies have been in existence only a short time and this has undoubtedly influenced the dividend figure. Their failure or success, however, can not be judged merely in terms of dividend, for their main benefit lies not in the returns made to depositors and stockholders but in the savings effected for the borrower through the lower rates of interest at which loans are given and in the benefit, which can not be evaluated, growing out of the relief of the exploited borrower and the lifting of the burden of anxiety from the shoulders of many a harassed father of a family, enabling him to regain his financial standing and self-respect.

TABLE 9.—AMOUNT AND RATE OF DIVIDENDS RETURNED BY CREDIT UNIONS, BY STATES

State	Number of societies paying dividends	Dividends paid		State	Number of societies paying dividends	Dividends paid	
		Amount	Rate (per cent)[1]			Amount	Rate (per cent)[1]
Alabama	16	$5,914	6.1	Montana	1	$180	6.0
Arizona	1	518	8.2	Nebraska	4	548	3.5
Arkansas	1	87	5.5	New Hampshire	1	19	2.4
California	11	4,170	4.1	New Jersey	4	8,231	4.7
Colorado	1	4,228	9.0	New York	125	42,750	.4
District of Columbia	1	293	2.1	North Carolina	14	2,640	8.2
Florida	1	2,700	8.3	Ohio	2	159	3.0
Georgia	18	14,166	6.4	Oregon	2	1,245	3.8
Illinois	24	20,854	4.9	Rhode Island	9	29,853	5.3
Indiana	16	10,641	4.2	South Carolina	1	409	8.4
Iowa	16	4,556	4.8	Tennessee	10	15,903	7.8
Kansas	2	52	1.5	Utah	3	809	5.9
Kentucky	8	5,248	6.2	Virginia	11	12,329	6.3
Louisiana	5	1,899	5.1	Washington	5	3,766	6.5
Maine	1	2,264	5.4	West Virginia	6	3,308	5.7
Maryland	2	265	1.3	Wisconsin	7	6,892	4.4
Michigan	7	7,957	5.0				
Minnesota	43	3,177	1.0	Total	[2] 386	220,250	1.5
Missouri	[2] 7	2,120	([3])				

[1] Based on capital of societies reporting.
[2] 25 other societies paid dividends (at rates ranging from 3.48 to 18 per cent) but did not report amount so paid.
[3] No data as to capital.

Development Since 1925

THE statement below shows the status of the credit unions in 1929, as compared with 1925 when the previous study was made. An enormous expansion has taken place, as the figures show.

TABLE 10.—DEVELOPMENT OF CREDIT SOCIETIES, 1925 AND 1929

Item	1925	1929
Total number of credit unions	284	974
Number furnishing reports	176	838
Membership:		
Number of members	107,779	264,908
Average per society	612	320
Resources:		
Paid-in share capital	$10,706,099	$24,065,407
Reserves	$973,873	$2,079,450
Deposits	$4,700,768	$9,017,786
Loans:		
Number of borrowers during year	52,836	153,934
Amount granted in loans	$20,100,356	$60,283,353
Average per borrower	$381	$39
Amount outstanding at end of year	$13,390,423	$30,811,582
Dividends paid:		
Number of societies	135	386
Amount returned	$458,183	$220,250
Average rate of expense (per cent)	1.80	1.79

Longshore Labor Conditions in the United States—Part II [1]

Longshore Labor Conditions in Major Ports of United States

New Orleans

THE longshore labor situation in New Orleans is very much confused by the existence in the port of large bodies of union and nonunion labor with different rates of wages. The union longshoremen do all the work for the United States Shipping Board, while all other companies use nonunion labor. It frequently happens, therefore, that a stevedore company operating on a pier uses one kind of labor for one ship and a different kind of labor for another ship. There is therefore no limit to the supply of longshore labor in port. While no figures of actual earnings are available, it is generally admitted by all the union men, white and colored alike, and by many employers, that the average earnings of the longshoremen are very low.

The docks cover a long stretch along the Mississippi River and the workers are required to "shape" at each pier where they are taken on for work by the hiring foremen. In New Orleans there are more rumors current of the abuse of the hiring power by the foremen than at any other port in the United States. It is stated that the workers are often compelled to borrow money from the foremen at exorbitant rates of interest. In other cases the colored men are merely paid a certain amount for the week, and the balance goes to the foreman, who is permitted to draw the pay on the brass checks turned over to him by the workers. These checks are often sold to saloon keepers and money lenders on the water front at very large discounts.

While it is absolutely impossible to get the average earnings of the longshoremen for the port as a whole, the three tables of earnings given below may be used as indicative of the average earnings of the

[1] Part I was published in the October issue of the Review, pp. 1-20.

union longshoremen in New Orleans. Table 9 represents the total distribution of the longshoremen working for a single company employing union labor only. The total at the bottom of the table represents the total number of pay envelopes issued by that company during the year 1926. Out of 10,573 such pay envelopes, 3,890 contained amounts of less than $15 per week, 3,505 from $15 to $25 per week, and only 3,178 pay envelopes contained $25 or more. Thus, more than two-thirds of all the pay envelopes issued by that company in 1926 contained amounts of less than $25 per week.

TABLE 9.—DISTRIBUTION OF EARNINGS OF UNION LONGSHOREMEN EMPLOYED BY A LARGE STEVEDORE COMPANY IN NEW ORLEANS, 1926

Week ending—	Number of men earning—			Total
	Under $15	$15 and under $25	$25 and over	
Jan. 9	55	97	49	201
Jan. 16	52	61	31	144
Jan. 23	37	65	47	149
Jan. 30	29	2	57	88
Feb. 6	68	17	67	152
Feb. 13	55	90	48	193
Feb. 20	88	54	82	224
Feb. 27	80	22	135	237
Mar. 6	97	79	36	212
Mar. 13	19	17	87	123
Mar. 20	94			94
Mar. 27	85	89	27	201
Apr. 3	27	225	41	293
Apr. 10	47	11		58
Apr. 17	97	96	69	262
Apr. 24	57	31	64	152
May 1	44	69	65	178
May 8	67	72	13	152
May 15	42	59	110	211
May 22	98		2	100
May 29	30	118	110	258
June 5	106	18		124
June 12	24	71	15	110
June 19	38	115	7	160
June 26	46	23	76	145
July 3	34	109	41	184
July 10	42	71	105	218
July 17	42	38	73	153
July 24	66	103	71	240
Aug. 7	40	66		106
Aug. 14	106	27	36	229
Aug. 21	85	62	88	235
Aug. 28	77	38	11	126
Sept. 4	87	41	58	186
Sept. 11	31	82	24	137
Sept. 18	59	31	126	216
Sept. 25	133	92	63	288
Oct. 2	75	105	81	261
Oct. 9	116	8	104	228
Oct. 16	44	124	31	199
Oct. 23	124	65	1	190
Oct. 30	190	86	70	346
Nov. 6	46	175	212	433
Nov. 13	242	40	27	309
Nov. 20	87	123	99	309
Nov. 27	155	56	53	264
Dec. 4	60	98	243	401
Dec. 11	27	37	81	145
Dec. 18	123	81	57	261
Dec. 25	156	179	57	392
Dec. 31	101	67	128	296
Total	3,890	3,505	3,178	10,573

Table 10 shows the actual monthly earnings of five union white longshoremen and seven colored men who have been selected as a sample because they were known to have worked permanently for one company during the entire year 1926. The average for the white men varies from $55.84 to $128.11 per month and the average for the colored men varies from $60.74 to $112.30 per month. Table 11 represents the distribution of the average weekly earnings of some 70 colored union men taken from the records of the union, which assesses its membership in proportion to their earnings. As the table shows, the earnings of the majority of the men fell within the two groups from $15 to $25, with the average around $20 per week. The three tables seem to prove the contention that the average earnings of the union men in the port of New Orleans are considerably lower than in any other large port in the United States.

TABLE 10.—MONTHLY EARNINGS OF INDIVIDUAL UNION LONGSHOREMEN WHO WORKED PERMANENTLY FOR ONE COMPANY IN NEW ORLEANS, 1926

Month	White longshoremen				
	No. 1	No. 2	No. 3	No. 4	No. 5
January	$131.17	$175.07	$120.37	$104.07	$105.03
February	138.87	172.37	179.72	123.85	133.80
March	76.48	81.28	59.68	17.20	80.55
April	111.70	116.45	114.40	84.30	95.60
May	130.40	124.80	127.85	53.19	124.00
June	78.40	78.40	78.40	----------	81.26
July	146.03	146.03	154.43	47.49	154.64
August	83.3[illegible]	83.75	63.75	28.40	101.90
September	111.60	109.60	109.60	73.67	106.80
October	131.32	131.72	126.52	43.59	128.53
November	135.91	167.66	87.51	51.15	74.56
December	148.49	150.22	146.62	43.22	120.89
Total	1,423.72	1,537.35	1,368.85	670.13	1,307.56
Average for month	118.64	128.11	114.07	55.84	108.96

Month	Colored longshoremen						
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
January	$104.63	$100.63	$57.04	$71.00	$109.67	$93.21	$157.52
February	115.95	112.45	111.08	125.16	135.61	143.75	100.80
March	78.75	78.75	106.46	72.40	83.94	90.09	64.00
April	95.55	95.55	66.36	48.80	56.15	60.80	106.50
May	108.30	125.90	26.40	70.20	111.25	131.40	131.20
June	79.26	95.76	14.40	33.40	66.20	53.85	65.60
July	152.24	121.84	115.08	82.01	127.96	----------	140.08
August	74.70	102.30	24.30	41.15	71.75	----------	90.85
September	107.60	112.00	102.22	38.70	107.20	67.55	109.60
October	132.73	100.02	104.55	31.80	112.26	112.26	126.52
November	119.66	129.41	70.15	92.00	113.48	103.98	109.51
December	123.48	108.75	133.44	22.25	163.12	163.12	145.42
Total	1,292.85	1,283.36	931.48	728.87	1,258.59	1,020.01	1,347.60
Average per month	107.74	106.95	77.62	60.74	104.88	85.00	112.30

TABLE 11.—SAMPLE DISTRIBUTION OF WEEKLY EARNINGS OF COLORED UNION LONGSHORE WORKERS IN NEW ORLEANS, 1926

Weekly wage group	Number having classified weekly earnings				
	August (average, 5 weeks)	September (average, 2 weeks)	October (average, 4 weeks)	November (average, 4 weeks)	December (average, 4 weeks)
Under $10	2	8	1	2	5
$10 to $14.99	7	8	11	6	5
$15 to $19.99	31	22	53	19	11
$20 to $24.99	29	13	4	43	35
$25 and over	1	14			13
Total	70	65	69	70	69

Houston and Galveston

In the two Texas ports, Houston and Galveston, nearly all foreign and intercoastal cargoes are handled by members of the union locals, the work being divided more or less equally between the white and colored longshoremen. The total membership of each local is kept within certain limits, and a rotation system is used by the locals, which helps to distribute the work and the earnings of the men as equitably as possible considering the abnormal seasonal and other fluctuations in the demand for longshore labor. The worst of these fluctuations are due to the guaranteed sailings on the 1st and 15th of each month. There is probably no other single cause which creates more hardships to the dock operators, stevedore companies, and longshoremen alike than this practice of guaranteed semimonthly sailings. A union representative of Houston describes the situation thus:

> With 10 days of idleness during the first part of the month, followed by 5 days of rush which taxes the ingenuity of the business agent under obligation to supply the men when wanted, we have a condition which we shall never be in a position to overcome. It is entirely unreasonable to expect two to three hundred men to remain idle day after day with the expectation of working perhaps two or three days in the middle of the month and then as many days at the end of the month. During the first and the third weeks of the month only a very small percentage of the men are working, and for almost half of the second and the fourth weeks there is work for only one-half of our membership. During the remaining parts of the second and the fourth weeks, however, most of the men work day and night, and still there are often ships for which we can not supply enough labor. Although the men are crowded to the very limit of their endurance, much of the work must be turned over to nonunion casuals, with resulting inefficiency to the companies and reductions in the total earnings of the regular longshoremen.

Table 12 represents the individual monthly earnings of four gangs (of 10 men each) of white longshoremen in the port of Houston for the whole year of 1927. Table 13 represents the earnings of 10 colored gangs (of 10 men each) in Galveston, given by semimonthly periods from September 17, 1927, to April 15, 1928, inclusive; this period covers almost the entire cotton season. Because of the rotation system used by the local unions the earnings of these gangs are fairly representative of the earnings of the other men in the two ports. In Houston the earnings vary from $38.69 for the month of July to $179.46 in January, with an average of about $100 per month. The earnings for the 2-week period in Galveston vary from $16.50 to $119.16, thus reflecting the fluctuations in the demand for long-

shore labor. For the entire period, however, the average earnings of the Galveston men show a variation from $32.16 to $33.74 per man per week, thus clearly indicating the effects of the earnings equalization scheme used by the union.

TABLE 12.—EARNINGS OF FOUR GANGS [1] OF WHITE LONGSHOREMEN IN HOUSTON, TEX., 1927

Month	Monthly earnings per man of—			
	Gang No. 1	Gang No. 2	Gang No. 3	Gang No. 4
January	$147.15	$179.46	$47.22	$145.46
February	121.91	98.21	130.18	143.02
March	136.70	146.67	119.90	120.95
April	74.16	109.46	96.04	70.71
May	105.04	62.88	60.21	93.15
June	39.68	60.69	62.23	60.82
July	53.45	55.69	53.34	38.69
August	79.93	82.19	91.51	107.22
September	118.80	121.36	98.19	127.74
October	142.34	139.30	145.15	136.28
November	121.20	132.88	138.50	106.65
December	55.50	83.03	69.86	109.10
Total	1,195.86	1,271.82	1,112.33	1,259.79
Average per month	99.66	105.99	92.69	104.98

[1] 10 men per gang.

TABLE 13.—EARNINGS OF 10 GANGS [1] OF COLORED LONGSHOREMEN IN GALVESTON, TEX., SEPTEMBER 17, 1927, TO APRIL 15, 1928

2-week period	Semimonthly earnings per man of—									
	Gang No. 1	Gang No. 2	Gang No. 3	Gang No. 4	Gang No. 5	Gang No. 6	Gang No. 7	Gang No. 8	Gang No. 9	Gang No. 10
Sept. 17 to Oct. 2, 1927	$60.29	$64.77	$59.09	$62.57	$50.78	$79.40	$51.39	$72.48	$73.72	$70.36
Oct. 3 to Oct. 15, 1927	78.32	90.38	64.08	80.96	91.60	53.61	92.12	72.88	77.97	74.80
Oct. 16 to Nov. 1, 1927	95.07	116.37	102.24	94.15	94.42	119.16	69.62	85.64	68.07	64.91
Nov. 2 to Nov. 14, 1927	57.50	17.20	50.00	50.86	38.74	41.20	55.38	57.56	73.71	76.02
Nov. 15 to Dec. 2, 1927	66.35	61.28	69.69	63.41	78.26	85.00	83.93	80.64	76.10	59.20
Dec. 3 to Dec. 17, 1927	45.03	43.40	44.63	48.50	25.75	22.34	39.73	16.50	32.70	58.46
Dec. 18, 1927, to Jan. 1, 1928	66.87	60.79	41.46	44.05	51.60	55.90	63.60	60.63	47.66	61.30
Jan. 2 to Jan. 16, 1928	48.87	53.42	91.62	53.89	52.33	76.85	72.87	73.94	114.93	56.86
Jan. 17 to Feb. 1, 1928	59.55	57.43	25.52	53.94	55.84	22.77	45.91	44.67	22.85	59.41
Feb. 2 to Feb. 14, 1928	63.97	72.06	54.85	76.17	78.71	74.64	52.70	64.88	46.89	76.17
Feb. 15 to Feb. 29, 1928	96.26	66.08	96.26	69.98	70.28	86.92	108.22	78.77	70.33	63.37
Mar. 1 to Mar. 16, 1928	62.48	93.52	66.08	84.18	95.16	110.99	54.74	101.12	119.10	105.71
Mar. 17 to Apr. 1, 1928	80.26	55.97	68.18	67.94	52.17	34.98	84.85	58.86	42.05	53.96
Apr. 2 to Apr. 15, 1928	63.92	77.22	66.79	62.46	73.06	62.91	49.14	72.94	61.76	63.10
Total (28 weeks)	944.74	929.89	900.49	913.06	908.70	926.67	924.20	921.51	927.84	943.63
Average per week	33.74	33.21	32.16	32.61	32.45	33.10	33.01	32.91	33.14	33.70

[1] 10 men per gang

Seattle

Seattle has the distinction of being the first port in the United States to introduce a system of decasualization for its water front, which became effective in 1921. The men are listed at the central employment office called the "dispatching hall" and are classified into longshoremen proper (those working either on the deck or in the hold of the ship) and truckers working on the pier. The longshoremen proper are organized into gangs of 10 men each and are subdivided into three groups: (1) Company gangs definitely assigned to one

shipping or stevedore company; (2) hall or reserve gangs to be dispatched from the central employment office as needed; and (3) casual men to be called upon only when all other longshoremen are already occupied. The truckers are also divided into registered truckers, regularly dispatched from the hall, and casual workers, to be used only when additional need for truckers arises.

The principle of dividing the work for the purpose of equalizing the earnings of the men is applied to the company and hall gangs and to the registered truckers. Thus, no company gang is supposed to earn more than a certain maximum per week if the earnings of the hall gangs are falling below a certain minimum. The "casuals," however, are definitely told that they will get work only in case of demand for additional labor. They are free to work anywhere outside the water front, but the registered men are required either to be present in the dispatching hall, as is the case with all truckers, or to be ready for work on very short notice. In November, 1926, the membership of the dispatching hall in Seattle was as follows:

	Number of men
Longshoremen proper:	
Registered longshoremen (33 gangs)	338
Extra registered men	260
Casual workers	93
Total	691
Truckers:	
Registered truckers	189
Casual truckers	75
Total	264
Total membership	955

The dispatching hall keeps a complete daily record of all the men dispatched for work, as well as a record of the individual earnings of the men which is used for the earnings equalization plan. It also has a central pay station, which enables the men to receive in one sum their earnings from all the companies for which they worked during the week. A strict rotation system applies to all the registered men except the company gangs and keeps their earnings on a more or less equal basis from month to month. Table 14 shows the actual monthly earnings of all the hall or reserve gangs for the year 1925. While these vary from $88, made by Gang No. 17 during January, to $244 made by Gang No. 11 during April, the average monthly earnings of all the gangs for the whole year, however, vary only from $153.33 to $162.10. These variations are comparatively small, and disappear altogether, as the scheme of earnings equalization is carried on not only from month to month but from year to year.

TABLE 14.—MONTHLY EARNINGS OF HALL OR RESERVE GANGS [1] IN SEATTLE, 1925

Month	Monthly earnings per man of—								
	Gang No. 1	Gang No. 2	Gang No. 3	Gang No. 4	Gang No. 5	Gang No. 6	Gang No. 7	Gang No. 8	Gang No. 9
January	$149.00	$115.00	$111.00	$122.00	$115.00	$184.00	$120.00	$135.00	$143.00
February	157.00	186.00	164.00	159.00	152.00	124.00	156.00	142.00	124.00
March	176.00	141.00	169.00	177.00	249.00	189.00	193.00	177.00	168.00
April	219.00	209.00	189.00	169.00	177.00	185.00	183.00	212.00	209.00
May	118.00	168.00	149.00	160.00	147.00	130.00	159.00	131.00	134.00
June	115.00	118.00	126.00	154.00	142.00	113.00	116.00	109.00	138.00
July	138.00	144.00	158.00	115.00	122.00	167.00	160.00	150.00	162.00
August	127.00	132.00	127.00	153.00	155.00	134.00	132.00	131.00	119.00
September	180.00	169.00	167.00	168.00	170.00	162.00	166.00	178.00	163.00
October	167.00	180.00	162.00	184.00	194.00	181.00	163.00	173.00	161.00
November	167.00	175.00	188.00	161.00	163.00	159.00	142.00	164.00	185.00
December	171.00	152.00	130.00	135.00	147.00	146.00	166.00	166.00	134.00
Total	1,884.00	1,889.00	1,840.00	1,857.00	1,933.00	1,874.00	1,856.00	1,868.00	1,840.00
Average per month	157.00	157.42	153.33	154.75	161.08	156.17	154.67	155.67	153.33

Month	Monthly earnings per man of—								
	Gang No. 10	Gang No. 11	Gang No. 12	Gang No. 13	Gang No. 14	Gang No. 15	Gang No. 16	Gang No. 17	Gang No. 18
January	$120.00	$138.00	----------	$151.00	$147.00	$135.00	$133.00	$88.00	$142.00
February	159.00	151.00	----------	133.00	120.00	147.00	152.00	145.00	157.00
March	154.00	157.00	$166.00	208.00	222.00	178.00	151.00	177.00	173.00
April	222.00	244.00	214.00	179.00	192.00	197.00	213.00	196.00	190.00
May	151.00	141.00	147.00	148.00	141.00	132.00	117.00	151.00	132.00
June	168.00	107.00	111.00	120.00	134.00	120.00	140.00	144.00	138.00
July	130.00	159.00	132.00	117.00	170.00	130.00	143.00	129.00	153.00
August	148.00	126.00	129.00	159.00	126.00	132.00	154.00	130.00	112.00
September	172.00	166.00	199.00	164.00	171.00	158.00	157.00	184.00	189.00
October	160.00	171.00	198.00	195.00	159.00	184.00	181.00	168.00	186.00
November	156.00	166.00	147.00	144.00	174.00	179.00	141.00	156.00	154.00
December	181.00	179.00	178.00	159.00	152.00	162.00	195.00	182.00	157.00
Total	1,921.00	1,905.00	[2] 1,621.00	1,877.00	1,908.00	1,854.00	1,877.00	1,850.00	1,883.00
Average per month	160.08	158.75	[2] 162.10	156.42	159.00	154.50	156.42	154.17	156.92

[1] 10 men in a gang.

[2] 10 months only.

The earnings of the company gangs are somewhat higher than those of the hall or reserve gangs, as these men have the right at any time to be transferred back to the list of the reserve gangs. The earnings of the truckers, on the other hand, are considerably lower, because their rate of pay is 10 cents per hour lower than those of the regular longshoremen. The earnings of the registered truckers for 1925 varied from $107 for the month of June to $137 for the month of April. The casual longshoremen earned for the year 1926 an average of $1,087.85, or a monthly average of $90.67, while the casual truckers earned a monthly average of only $60.17. But even these lowest figures, for the casual men, are considerably higher than the average of the port before decasualization was put into effect.

Portland

Portland, Oreg., inaugurated its scheme of decasualization in 1923. In Portland there is no segregation between longshoremen proper and truckers, all the men being classified as longshoremen, at equal rates of pay; also, there are no individual company gangs. The labor force

consists of 300 so-called "permanent" men, divided into 25 gangs of 12 men each. These are considered the backbone of the organization and are given the preference on all work. Then there are about 400 so-called "extra board" men from whom extra gangs are formed when needed. These men are also used to supplement the permanent gangs when additional truckers are needed, as well as to replace the absentees in the gangs. Finally, there are about 400 casual workers also registered at the hall, but these are dispatched only when all the regular men are already working.

The dispatching hall uses a rotation system for the purpose of equalizing the earnings of all the permanent gangs. Every month the earnings of the individual gangs are checked and the gang with the lowest earnings is placed first on the list, followed by the next to the lowest, etc. These earnings, however, do not include the additional amounts earned by the men when working outside of the gang or when working in any of the Columbia River ports which are outside of the jurisdiction of the dispatching hall.

Table 15 shows the average monthly earnings of the 25 permanent gangs for the 5-year period, 1924 to 1928. In 1928 the average low rate was $127.05 and the average high rate was $146.95. The "extra board" men, for whom no figures are kept, earned less than these gangs and the casual workers, of course, still less.

TABLE 15.—AVERAGE MONTHLY EARNINGS OF 25 PERMANENT GANGS IN PORTLAND, OREG., 1924 TO 1928

Gang	Average monthly earnings per man					
	1924	1925	1926	1927	1928	1924–1928
Gang No. 1	$149.08	$135.29	$139.47	$126.89	$135.80	$137.31
Gang No. 2	145.63	135.88	136.17	121.78	127.05	133.30
Gang No. 3	144.28	132.45	138.89	121.76	127.98	133.07
Gang No. 4	142.90	142.13	156.81	128.65	146.95	143.49
Gang No. 5	145.23	144.91	149.39	132.27	138.91	142.14
Gang No. 6	149.20	142.69	141.46	130.16	133.33	139.37
Gang No. 7	143.09	136.77	156.50	110.84	135.85	136.61
Gang No. 8	152.96	143.47	144.13	126.63	143.65	142.17
Gang No. 9	148.47	132.14	148.82	126.00	143.29	139.74
Gang No. 10	143.02	133.63	132.28	113.93	(1)	[2] 130.72
Gang No. 11	142.73	119.87	(1)	(1)	140.00	[3] 134.20
Gang No. 12	144.75	134.24	142.28	124.20	132.20	135.53
Gang No. 13	152.16	143.08	139.53	128.90	139.24	140.58
Gang No. 14	149.83	139.06	137.12	(1)	141.00	[2] 141.75
Gang No. 15	143.38	138.72	135.79	124.43	134.88	135.44
Gang No. 16	155.57	145.84	149.88	131.72	132.27	143.06
Gang No. 17	148.89	141.16	143.82	120.17	140.27	138.86
Gang No. 18	143.64	135.47	(1)	(1)	(1)	[4] 139.56
Gang No. 19	145.93	139.66	144.20	126.33	139.84	139.19
Gang No. 20	146.92	136.03	139.18	128.04	140.80	138.19
Gang No. 21	149.64	140.17	143.49	124.05	142.44	139.96
Gang No. 22	145.15	145.09	150.18	127.92	137.18	141.10
Gang No. 23	141.33	127.13	135.31	127.83	135.19	133.36
Gang No. 24	148.93	142.70	138.51	118.56	129.78	135.70
Gang No. 25	155.73	141.42	148.76	133.17	142.74	144.36

[1] Disbanded. [2] Average for 4 years. [3] Average for 3 years. [4] Average for 2 years.

The dispatching hall operates a central pay office, all the men, irrespective of their place of work, being paid off there. In addition, it also operates a loan fund from which money is advanced to the individual men on their brass checks and from which aid is given to sick and injured workers.

In neither Seattle nor Portland, however, do the schemes of decasualization cover all the longshore workers in the ports. Both plans were organized against the opposition of the local unions of the International Longshoremen's Association, and in both ports there still remain a considerable number of men who refuse to accept the plan. These remain on the waterfront accepting work here and there, particularly from such organizations as the United States Shipping Board or the port authorities, which because of their official position have adopted an attitude of neutrality as between the dispatching hall and the union locals.

San Francisco

San Francisco is the only large port on the Pacific coast which has not been decasualized. The employers' organization has an agreement with the Longshoremen's Association of San Francisco by which members of the association are given preference for work in port. Of a total of approximately 5,000 men registered with this organization, about 3,000 pay regular dues and are active on the beach. Some of these men are permanently employed by individual companies; others, of course, are compelled to look for work along the entire waterfront. The longshoremen "shape" once a day at the foot of Market Street, where the hiring foremen "pick" their men and order them to report at the respective piers or dispatch them in trucks to the more distant piers. Here, as in other ports which have not been decasualized, it is impossible to establish even approximately the average weekly earnings of the men in the port as a whole.

The trend of the earnings of the permanent men, however, may be determined from Table 16, representing 10 of the 15 permanent gangs of 18 men each employed by Company H and 8 permanent gangs employed by Company I.

TABLE 16.—MONTHLY EARNINGS OF SPECIFIED PERMANENT GANGS[1] OF LONGSHOREMEN EMPLOYED BY TWO COMPANIES IN SAN FRANCISCO, 1926

Company H

Month	Monthly earnings per man of—									
	Gang No. 1	Gang No. 2	Gang No. 3	Gang No. 4	Gang No. 5	Gang No. 6	Gang No. 7	Gang No. 8	Gang No. 9	Gang No. 10
January	$163.00	$174.00	$35.00	$149.00	$184.00	$121.00	$158.00	$110.00	$76.00	$96.00
February	164.00	171.00	136.00	183.00	230.00	207.00	156.00	123.00	138.00	.....
March	207.00	232.00	247.00	221.00	255.00	216.00	199.00	239.00	207.00	131.00
April	165.00	187.00	158.00	180.00	166.00	166.00	143.00	150.00	163.00	103.00
May	139.00	127.00	159.00	137.00	166.00	152.00	119.00	172.00	150.00	36.00
June	226.00	238.00	188.00	238.00	209.00	231.00	200.00	147.00	161.00	135.00
July	197.00	163.00	150.00	198.00	166.00	194.00	105.00	150.00	76.00	151.00
August	230.00	227.00	200.00	218.00	251.00	127.00	138.00	242.00	233.00	185.00
September	174.00	149.00	141.00	171.00	155.00	183.00	102.00	122.00	129.00	107.00
October	186.00	178.00	175.00	208.00	209.00	196.00	74.00	80.00	199.00	106.00
November	281.00	255.00	243.00	281.00	253.00	291.00	233.00	5.00	210.00	266.00
December	176.00	165.00	168.00	173.00	182.00	183.00	93.00	.....	177.00	115.00
Total	2,308.00	2,266.00	2,000.00	2,357.00	2,426.00	2,267.00	1,720.00	1,540.00	1,919.00	1,431.00
Average per month	192.33	188.83	166.67	196.42	202.17	188.92	143.33	128.33	159.92	119.25

[1] 18 men per gang.

TABLE 16.—MONTHLY EARNINGS OF SPECIFIED PERMANENT GANGS OF LONGSHOREMEN EMPLOYED BY TWO COMPANIES IN SAN FRANCISCO, 1926—Continued

Company I

Month	Monthly earnings per man of—							
	Gang No. 1	Gang No. 2	Gang No. 3	Gang No. 4	Gang No. 5	Gang No. 6	Gang No. 7	Gang No. 8
January	$168.54	$182.71	$196.44	$159.99	$185.79	$167.64	$158.43	$183.17
February	164.14	164.26	164.27	173.36	158.24	150.53	174.65	146.49
March	188.76	172.60	190.14	180.46	187.47	186.99	172.13	176.41
April	140.41	160.11	149.87	155.48	160.31	154.37	171.01	155.49
May	195.98	183.83	182.39	185.19	195.10	204.76	193.97	207.24
June	128.08	134.33	158.87	138.84	137.73	134.25	151.69	150.08
July	139.51	139.73	112.74	131.19	116.34	129.36	111.84	122.88
August	200.94	195.07	217.81	194.86	219.63	207.15	219.40	217.60
September	172.13	167.19	149.68	159.09	160.11	151.66	157.51	155.49
October	215.67	234.80	215.34	211.52	201.95	217.91	208.01	211.19
November	170.90	166.39	182.72	200.49	171.45	183.30	176.52	176.97
December	190.37	197.34	209.26	186.09	206.80	187.89	206.35	193.02
Total	2,075.43	2,098.36	2,129.53	2,076.56	2,100.92	2,075.81	2,101.51	2,096.03
Average per month	172.95	174.86	177.46	173.05	175.08	172.98	175.13	174.67

The monthly averages of the 10 gangs of Company H show a range from $119.25 for Gang No. 10, to $202.17 for Gang No. 5. Company I uses a regular rotation scheme for its employees, and every week and every month the list of the gangs is so rearranged as to give the gang with the lowest earnings the first chance for work. The earnings of the gangs are posted regularly on a bulletin board so that the men know their standing in the rotation scheme. The average earnings of these eight gangs for the year 1926 show variations from $172.95 per man per month for gang No. 1, to $177.46 per man per month for gang No. 3. The small range shows the results of the equalization scheme used by the company.

There is, however, no check on the earnings of the casual men, whose numbers often are considerably larger than those in the permanent gangs. The data below, which were taken from the pay rolls of Company K, give an approximate idea of the actual distribution of the earnings of the casual and permanent men combined. There were 354 longshoremen who worked for this company eight weeks or more during the year 1926.

Weekly earnings	Number of men
Under $10	12
$10 to $14.99	38
$15 to $19.99	62
$20 to $24.99	85
$25 to $29.99	63
$30 to $34.99	43
$35 and over	51
Total	354

The statement below shows the distribution of the same men, on the basis of the number of weeks worked for this company:

	Number of men
8 to 11 weeks	16
12 to 15 weeks	49
16 to 19 weeks	30
20 to 23 weeks	29
24 to 27 weeks	28
28 to 31 weeks	26
32 to 35 weeks	21
36 to 39 weeks	26
40 to 43 weeks	24
44 to 47 weeks	18
48 weeks and over	87
Total	354

The above figures, showing some men in every one of the wage or time groups, speak of conditions similar to those found in the Atlantic ports. The same inequalities in distribution of work and in the corresponding earnings exist in San Francisco as in New York or Baltimore. Here also the practices of some companies in keeping permament gangs merely result in very high earnings for the privileged men, with correspondingly low earnings for all other longshoremen.

Los Angeles

The port of Los Angeles was decasualized in 1922. It is the only port in the United States whose scheme of decasualization applies to all longshoremen in port. All the men are registered in the Marine Service Bureau, which is the central dispatching hall of the port. In 1929 the men were divided into the following groups:

	Number of men
Ship men (regular longshoremen):	
61 gangs	549
6 shoveling gangs	54
67 gangs	603
Dock men:	
89 gangs	554
Special steady men	50
Total	604
Lumbermen:	
Steady men	95
Extra men	175
Total	270
Casual workers, (ship, dock, and lumber)	151
Total number of registered men	1,628

The majority of these men are assigned to individual companies, the number sent to each being determined by the ability of the company to supply more or less steady work to the men assigned to it. The workers retain their right to return to the hall-gang list if earnings are unsatisfactory or for any other valid reason. Each company is therefore required to keep a record of the earnings of their men, and since October, 1929, the Marine Service Bureau has been supplied

by these companies with daily reports of the hours worked and the earnings for all the ship gangs.

Table 17 shows the earnings of the 61 permanent ship gangs for the seven months from October, 1929, to April, 1930, inclusive. These late figures are shown here because total figures for the entire port are not available for any previous period. In spite of the trade depression which must have affected the shipping in this port as in the other ports, the seven months' average earnings of these gangs, varying from $126.62 to $199 per man per month, are considerably higher than at any other port.

TABLE 17.—EARNINGS OF 61 GANGS OF LONGSHOREMEN IN LOS ANGELES, IN SPECIFIED MONTHS, 1929 AND 1930

Gang	Earnings per man per month							Total earnings	Average earnings per month
	1929			1930					
	October	November	December	January	February	March	April		
	Company L								
Gang No. 1	$177.53	$199.24	$220.95	$185.40	$154.80	$205.09	$176.63	$1,319.64	$188.52
Gang No. 2	180.57	186.44	192.38	184.05	151.88	216.00	175.84	1,287.16	183.88
Gang No. 3	182.59	206.89	231.19	201.83	185.40	202.05	183.04	1,392.99	199.00
Gang No. 4	168.30	194.13	219.94	212.40	162.00	192.38	189.34	1,338.49	191.21
Gang No. 5	184.17	201.27	218.37	201.15	171.00	167.18	207.12	1,350.26	192.89
Gang No. 6	208.80	244.02	207.00	180.90	147.27	230.97	170.78	1,389.74	198.53
Gang No. 7	180.90	180.79	180.68	182.70	155.70	216.45	194.40	1,291.62	184.52
Gang No. 8	169.77	200.03	230.29	174.83	170.10	199.80	174.38	1,319.20	188.46
Gang No. 9	180.23	197.89	215.55	185.85	133.20	199.80	177.75	1,290.27	184.32
Gang No. 10	161.10	182.37	194.63	176.63	170.67	232.20	160.88	1,278.48	182.64
Gang No. 11	169.20	173.71	178.20	190.58	173.93	187.20	178.20	1,251.02	178.72
	Company M								
Gang No. 12	210.60	187.54	165.83	145.80	124.99	150.75	173.48	1,158.99	165.57
Gang No. 13	195.64	168.81	141.98	153.79	156.72	141.98	169.77	1,128.69	161.24
Gang No. 14	206.44	185.08	163.69	146.03	164.03	156.60	170.44	1,192.31	170.33
Gang No. 15	193.73	182.14	170.55	138.38	174.38	160.65	172.80	1,192.63	170.38
Gang No. 16	186.64	171.79	156.94	127.58	162.45	156.94	164.14	1,126.49	160.93
Gang No. 17	198.68	176.74	154.80	140.18	174.49	153.00	178.54	1,176.43	168.06
Gang No. 18	185.40	164.54	145.02	130.73	170.67	153.90	181.69	1,131.95	161.71
Gang No. 19	201.83	179.51	157.17	125.78	146.77	176.85	165.04	1,152.95	164.71
Gang No. 20	230.63	189.64	148.73	146.25	158.63	166.73	164.37	1,204.98	172.14
	Company N								
Gang No. 21	253.13	203.74	161.55	188.78	155.25	147.60	150.08	1,260.13	180.02
Gang No. 22	205.43	166.73	127.58	175.50	142.65	151.65	168.30	1,137.84	162.55
Gang No. 23	222.30	199.80	177.30	162.79	177.30	142.43	153.23	1,235.15	176.45
Gang No. 24	248.85	200.37	152.78	162.57	147.83	136.13	137.82	1,186.35	169.48
Gang No. 25	243.79	209.03	175.17	175.28	158.40	156.83	144.23	1,262.73	180.39
Gang No. 26	255.04	201.21	148.28	173.70	168.08	187.65	160.23	1,294.19	184.88
Gang No. 27	243.45	201.20	176.85	171.00	179.55	139.28	147.83	1,259.16	179.88
Gang No. 28	209.82	175.67	141.53	160.99	147.60	146.59	128.48	1,110.68	158.67
Gang No. 29	250.54	205.61	161.55	165.15	167.40	137.93	151.65	1,239.83	177.12
Gang No. 30	218.37	183.77	149.18	168.08	167.85	129.83	148.95	1,166.03	166.58
Gang No. 31	160.43	145.01	129.60	151.77	165.83	119.70	147.60	1,019.94	145.71
Gang No. 32	256.62	264.16	153.23	146.03	144.68	153.45	166.73	1,284.90	183.56
	Company O								
Gang No. 33	163.69	154.14	132.64	127.58	162.45	141.75	140.07	1,022.32	146.05
Gang No. 34	175.73	152.34	141.08	106.65	142.88	136.69	142.99	998.36	142.62

TABLE 17.—EARNINGS OF 61 GANGS OF LONGSHOREMEN IN LOS ANGELES, IN SPECIFIED MONTHS, 1929 AND 1930—Continued

Gang	Earnings per man per month							Total earnings	Average earnings per month
	1929			1930					
	October	November	December	January	February	March	April		
	Company P								
Gang No. 35	$157.50	$180.23	$203.13	$179.55	$180.00	$225.90	$164.70	$1,291.01	$184.43
Gang No. 36	140.85	157.15	175.05	172.80	168.75	208.35	180.45	1,203.40	171.91
Gang No. 37	140.85	147.83	154.80	162.45	167.85	192.60	153.00	1,119.38	159.91
Gang No. 38	147.60	167.63	187.65	181.35	188.10	220.95	193.95	1,287.23	183.89
Gang No. 39	131.94	156.60	181.35	174.15	172.35	193.05	170.10	1,179.54	168.51
Gang No. 40	127.80	156.38	184.95	142.65	166.50	197.10	156.15	1,131.53	161.65
ang No. 41	129.15	132.98	136.80	126.90	135.90	162.90	135.00	959.63	137.09
	Company Q								
Gang No. 42	263.59	225.68	187.77	120.60	107.67	122.85	123.19	1,151.35	164.48
Gang No. 43			168.08	114.80	102.27	141.30	117.45	643.90	128.78
Gang No. 44	241.54	210.16	178.77	122.94	120.27	155.25	132.30	1,161.23	165.89
Gang No. 45	239.74	207.51	175.28	128.03	108.45	142.65	113.40	1,115.06	159.29
Gang No. 46	238.62	212.18	185.74	127.35	112.05	155.70	125.10	1,156.74	165.25
	Extra Gangs [1]								
Gang No. 47	178.99	160.78	142.65	135.90	123.30	132.30	133.43	1,007.35	143.91
Gang No. 48	154.58	147.77	140.97	128.14	123.87	125.55	130.62	951.50	135.93
Gang No. 49	174.72	158.08	141.42	136.58	128.59	136.92	144.23	1,020.54	145.79
Gang No. 50	181.24	157.51	133.77	131.29	128.48	130.50	132.75	995.54	142.22
Gang No. 51	162.45	137.76	113.07	118.80	129.27	138.15	135.00	934.50	133.50
Gang No. 52	158.07	141.25	124.43	122.74	123.30	131.85	136.02	937.66	133.95
Gang No. 53	179.33	152.73	126.12	129.83	131.85	128.37	132.98	981.21	140.17
Gang No. 54	141.30	127.58	113.85	123.53	125.44	141.30	127.69	900.69	128.67
Gang No. 55	161.44	146.70	141.87	118.24	125.10	133.77	136.02	963.14	137.59
Gang No. 56	158.67	136.51	115.32	117.00	132.64	131.40	139.17	930.71	132.96
Gang No. 57	137.25	127.71	118.24	118.24	118.92	138.15	127.80	886.31	126.62
Gang No. 58	179.33	151.35	123.37	136.13	129.27	131.40	140.63	991.48	141.64
Gang No. 59	165.65	143.35	121.05	124.54	132.08	132.30	130.73	949.70	135.67
Gang No. 60	147.49	146.87	146.25	124.88	123.75	137.25	135.23	961.72	137.39
Gang No. 61	165.38	145.13	123.98	143.10	129.38	136.13	135.90	979.00	139.86

[1] Rotated from company to company.

As a check on the above figures, in Table 18 are shown the 1926 earnings of the gangs assigned to two companies. The average monthly earnings vary for one company from $144.37 to $175.94 and for the other from $155.16 to $208.31 per man—averages which are substantially higher than for the 7-month period shown above. Although the truckers earn much less than the permanent gangs, and the casual men considerably less, the average earnings of the longshoremen in the port of Los Angeles are undoubtedly higher and more equitably distributed than in any other port in the United States.

TABLE 18.—MONTHLY EARNINGS OF 16 GANGS[1] OF LONGSHOREMEN ASSIGNED TO TWO COMPANIES IN LOS ANGELES, 1926

Company R

Month	Monthly earnings per man of—								
	Gang No. 1	Gang No. 2	Gang No. 3	Gang No. 4	Gang No. 5	Gang No. 6	Gang No. 7	Gang No. 8	Gang No. 9
January	$225.53	$195.60	$209.99	$190.25	$211.28	$218.67	$199.93	$140.33	$188.67
February	158.18	164.67	232.34	174.83	204.74	195.56	209.14	161.62	165.11
March	201.76	162.79	158.52	176.64	196.01	200.51	191.80	149.25	135.24
April	285.41	191.20	259.65	228.83	302.50	297.95	238.71	180.08	192.84
May	199.03	166.09	169.67	164.03	189.32	190.32	181.13	153.88	141.37
June	216.01	203.78	216.63	222.81	219.04	232.22	224.59	162.15	197.45
July	170.25	129.10	169.45	190.77	161.32	159.92	169.58	117.44	150.11
August	158.58	183.03	179.61	149.44	174.72	164.98	154.12	132.89	114.36
September	199.18	186.38	216.43	188.72	222.96	253.08	212.14	197.63	196.11
October	187.23	142.72	177.33	189.06	184.82	177.04	192.84	139.59	138.45
November	191.37	178.49	170.51	162.14	187.44	188.04	217.47	143.13	143.94
December	230.46	206.77	217.02	217.27	228.42	221.37	223.72	183.95	183.64
Total	2,422.99	2,110.62	2,377.15	2,254.79	2,482.57	2,499.66	2,415.17	1,861.94	1,947.29
Average per month	201.92	175.89	198.10	187.90	206.88	208.31	201.26	155.16	162.27

Company S

Month	Monthly earnings per man of—						
	Gang No. 1	Gang No. 2	Gang No. 3	Gang No. 4	Gang No. 5	Gang No. 6	Gang No. 7
January	$171.34	$162.04	$151.65	$162.97	$167.70	$161.34	$165.73
February	152.50	172.39	138.42	158.12	136.10	141.48	174.31
March	185.96	144.89	187.91	202.00	169.98	179.54	174.19
April	162.03	165.63	166.86	167.05	133.50	155.97	175.40
May	154.79	149.28	159.03	140.38	96.94	136.70	145.67
June	182.29	161.52	153.99	154.79	153.23	187.32	158.88
July	155.60	169.33	148.14	148.90	135.94	161.81	187.62
August	142.35	143.42	152.76	145.19	152.54	146.25	143.39
September	204.51	185.36	208.98	215.28	200.21	162.64	182.86
October	207.61	179.74	182.57	198.38	196.40	175.36	180.47
November	180.95	163.98	170.01	163.00	153.66	75.28	80.89
December	211.31	215.07	159.66	206.33	202.40	48.75	.....
Total	2,111.24	2,012.65	1,979.98	2,062.39	1,898.60	1,732.44	[2] 1,769.41
Average per month	175.94	167.72	165.00	171.87	158.22	144.47	[2] 160.86

[1] 10 men in a gang.

[2] 11 months.

Conclusion

IN VIEW of the extreme differences in the systems of employing longshore labor, particularly in the distribution of the work and the earnings of the men on the water fronts of the three decasualized ports, Seattle, Portland, and Los Angeles, as contrasted with the other ports in the United States, it might be worth while to inquire into the prospects of decasualizing the other ports. The question is rather hard to answer because of certain complications in the relationship between the employers of Seattle, Portland, and Los Angeles and the International Longshoremen's Association. It so happened that Seattle, Portland, and Los Angeles adopted their schemes of decasualization only after a long period of serious and violent labor clashes which resulted in the defeat of the local unions, members of the International. In none of the three ports is the union now considered

an important factor on the water front, and the employers refuse to recognize the International Longshoremen's Association as the representative of their men. The result is that the International, as an organization, is definitely antagonistic to any scheme of decasualization, which it regards simply as a union-breaking medium.

That this is not necessarily the case, however, can be shown from the experience of most of the decasualized European ports, particularly Liverpool, where union labor is now an effective element in the operation of the scheme of decasualization. From a neutral and almost antagonistic observer at the inception of the plan in 1912, the union has now become a most enthusiastic defender of the plan. On the other hand, it must also be emphasized that the conditions in Seattle, Portland, and Los Angeles are somewhat lacking in stability because of the absence of a labor organization outside their dispatching halls. The plans of decasualization there were originated and are now managed almost exclusively by the employers, with the workers having comparatively very little to say either in the management or in the operation of the respective schemes.

In the eastern ports not even the employers are unanimously in favor of decasualizing their ports. It will therefore require a considerable amount of education to get the union and the employers favorably disposed to any scheme of decasualization. Finally, not all the ports in the country are ready for such reorganization. Certain ports can be decasualized more quickly and more successfully than other ports. Assuming a favorable attitude by both capital and labor, which must be considered requisite for any effective scheme of decasualization, the ports of Boston and Baltimore on the Atlantic coast, Houston and Galveston on the Gulf, and San Francisco on the Pacific, offer the most favorable conditions for a successful beginning. In all of these ports the unions have a more or less definite limit on their membership, which would make it comparatively simple to obtain a complete registry of the longshoremen in the port. In Baltimore and in the Texas ports the gang system is in vogue and is favorably regarded by both the unions and employers; Houston and Galveston, and to some extent San Francisco also, have systems of dividing the work on a rotation basis, and Houston even has a central pay station for all longshoremen. The relationship between the employers and the local unions in these ports has been very cordial for a number of years, and the ground has been thus prepared for an experiment in decasualization carried out by efforts of both sides. The details of the schemes used will greatly depend on the local conditions in each port, but the management must necessarily be vested in a central agency consisting of representatives of employers and workers.

With these ports decasualized or even on the road toward decasualization, New York and other ports will follow suit. A comprehensive system of decasualization for the port of New York was proposed by the mayor's committee on unemployment in 1916, but the scheme failed of realization largely because it originated from sources other than those actually engaged in the longshore industry. With the organization of employers and the local unions in favor of such a plan, New York too can be decasualized, and it is not too soon to get started.

The Labor Situation in Korea

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KOREA is preeminently an agricultural country, about 77 per cent of her people being engaged in farming. Consequently, rural labor overshadows urban labor both in magnitude and importance. In recent years, however, industrialization has begun to influence the economic and social life of the Koreans, and as time goes on industrial progress will bring about fundamental changes in social habits and mode of living of considerable portions of the Korean population. Present-day labor problems of Korea, therefore, vitally concern both the farmer and the city worker. In agriculture the outstanding problems are land ownership, tenancy, high rent, and usury. In the cities the workers are demanding higher wages, shorter working-days, and better relations between employers and employees, the last-mentioned having special significance, as the leading employers in Korea are mainly Japanese and the laborers predominantly Korean.

Furthermore, the problem of Korean labor should be discussed in connection with the general economic and social situation in the Far East. Should Korea remain an agricultural country or should she unreservedly engage in modern industry? In either case, what would be the effect on Japan and China? Thus viewed, the labor problems of Korea are not internal and isolated, but international and in a measure interrelated with the industrial and socio-economic conditions of her neighbors.

Beginnings of Industralization

Although modernization tendencies in Korea existed before the annexation of Korea to Japan in 1910, systematic introduction of machine industry began with the Japanese régime in Korea. Japanese activities, both official and private, have materially hastened industrialization. Japan's superior industrial experience and her surplus wealth, which is available for investment in Korea, put her in an unusually advantageous position to develop Korean industries. In many cases, Japanese industrialists were the first to establish factories and industrial enterprises in Korean towns. In Korea to-day the relatively more important mines, factories, and business enterprises are financed, managed, and controlled by the Japanese. Among the industries under Japanese capital and management the following are prominent: Rice milling, iron foundries, tile and brick making, wines and spirits making, electric companies, lumber, and leather. More recently, the Japanese have gone into flour mills, sugar mills, pulp and paper factories, textile, cement, pottery and porcelain, and match factories. The principal industries of the Koreans include the textiles (cotton, silk, and hemp), pottery and porcelain, paper, wine, and hardware.

The progress of industrialization in Korea may be seen from a comparison of the status of industry at the time of annexation and at a more recent date. During the 17-year period ending 1927, according to a statistical report of the Governor General of Korea, the number of factories in Korea increased 19.5 times, capital increased 51.1 times, employees 6.1 times, horsepower 19.4 times, and value of

industrial products 18.8 times. In 1927 there were in Korea 4,914 factories, with a total capital of $271,323,092,[1] and having 89,142 employees (6,163 Japanese, 4,632 Chinese, and the remainder Koreans), a total horsepower of 117,732, and industrial products of a total value of $184,819,854. Although only a little over 40 per cent of the factories are Japanese owned, their capital represents over 85 per cent of the total.

Japan is Korea's financier as well as leading customer, about 80 per cent of Korea's foreign trade being with Japan. Korea's exports to Japan comprise mainly agricultural and mineral products, chief among which are rice, beans, cocoons, lumber, coal, fish, animals, and leather. The imports are textiles, hardware, agricultural implements, tools, cement, paper—all manufactured goods.

Another phase of industrialization is the operation of mines along modern lines. Coal comes first in economic importance, followed by iron, gold, and lead. There are 43 mines in the country employing 100 or more workmen, with an aggregate annual production value slightly under $5,000,000. The ownership of the mines is largely Japanese, they owning probably 79 per cent of the total, the Koreans about 7 per cent, and foreigners (principally American, German, and English) about 14 per cent.

Economic and Social Conditions of Factory Workers and Miners

THE industrial population of Korea consists principally of factory workers and miners, the total being a little over 1,000,000. In 1927 there were 954,832 miners (918,281 males and 36,551 females). The wages of the miners in the various occupations are not uniform, but on the whole, underground workers command higher wages than surface workers. At Heijo, mine machinists receive a maximum of $1.85, a minimum of 25 cents, or an average wage of 51.5 cents per day. Surface transport workers receive a maximum of $1.75, a minimum of 28 cents, or an average wage of 31 cents per day. Working hours are not always definite, being governed in some cases by custom, rather than definite hours being stipulated between mine operator and worker. In the modern mines, however, the 10-hour working-day, including a rest period of one or one and a half hours, seems to be an established practice. The 2-shift and 3-shift systems are also in use in some progressive mines.

Among factory workers agitation for a shorter working-day was started earlier than among miners, and up to 1918 the 10-hour day was observed by a large number of the factories. Prior to 1923, the working hours were reduced to nine per day, but since then the working hours in certain factories have been irregular, due to the business depression.

In factories the wages vary according to occupation and nationality. In 1923 the Governor General's Office made a survey of the principal industries in Korea, the results of which show the general conditions of the industrial population. The workers in the five main industries and also in miscellaneous occupations receive a maximum wage

[1] Conversion into United States currency made on basis of yen at par = approximately 50 cents.

of $1.25, a minimum wage of 25 cents, or an average wage of 48 cents per day. The details are shown in Table 1.

TABLE 1.—DAILY WAGES OF INDUSTRIAL WORKERS IN KOREA, BY INDUSTRY GROUP AND BY GEOGRAPHICAL LOCATION

[Conversions made on basis of yen at par=approximately 50 cents]

Industry group	Geographical location													
	Keikido	Chushinhokudo	Chushinnando	Zenrahokudo	Zenranando	Keishohokudo	Keishonando	Kokaido	Heiannando	Heianhokudo	Kogendo	Kankyonando	Kankyohokudo	Average
Industrial and mining:														
Maximum	$2.50	$1.00	$2.60	$2.00	$1.75	.....	$2.50	$2.30	$2.50	$2.00	$2.25	$2.33	$2.00	$2.15
Minimum	.05	.13	.09	.08	.08	.....	.08	.10	.09	.08	.15	.10	.05	.10
Average	.58	.51	.42	.40	.32	$0.74	.39	.34	.39	.29	.59	.46	.34	.44
Civil engineering:														
Maximum	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.25	1.00	.....	.....	1.13
Minimum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.20	.40	.....	.....	.30
Average	.....	.....	.....	.....	.....	.....	.....	.....	.....	.37	.58	.....	.....	.47
Agricultural and pastoral:														
Maximum	.....	.30	.10	.....	.....	.....	.....	.....	.....	.....	.80	.....	.....	.40
Minimum	.....	.22	.10	.....	.....	.....	.....	.....	.....	.....	.10	.....	.....	.14
Average	.....	.28	.10	.....	.....	.....	.....	.....	.....	.....	.29	.....	.....	.23
Aquatic:														
Maximum	1.10	.....	.....	.....	.....	.....	1.00	.....	.....	.....	.60	.....	1.50	1.05
Minimum	.25	.....	.....	.....	.....	.....	.50	.....	.....	.....	.22	.....	.10	.27
Average	.52	.....	.....	.....	.....	.....	.60	.....	.....	.....	.39	.....	.39	.47
Communication and transportation:														
Maximum	.....	.....	1.67	1.86	.....	.....	1.25	.....	.....	1.35	.....	1.25	1.82	1.53
Minimum	.....	.....	.35	.61	.....	.....	.50	.....	.....	.60	.....	.25	.47	.47
Average	.....	.....	.47	1.10	.....	.97	.58	.....	.....	.94	.....	.59	1.00	.81
Miscellaneous:														
Average	.....	.....	.....	.....	.....	.31	.....	.....	.....	.....	.....	.....	.....	.31
Average:														
Maximum	1.80	.65	1.46	1.93	1.75	.....	1.59	2.30	2.50	1.54	1.17	1.79	1.77	1.25
Minimum	.15	.17	.18	.35	.08	.....	.36	.10	.09	.29	.22	.18	.21	.25
Average	.55	.40	.33	.75	.32	.67	.52	.34	.39	.53	.46	.52	.58	.48

The same authority also classified wages according to the nationality of the workers, which brings out the differences between the wages of the Japanese, Korean, and Chinese workers in Korea. Table 2 analyzes the wages of industrial workers according to geographical location and nationality. The average daily wage of the Japanese worker is $1.07, that of the Korean worker, 55.5 cents, and that of the Chinese worker, 62 cents. From early summer in 1916 wages showed an upward trend, but beginning with March, 1920, when business depression started in Korea, wages took a downward turn.

TABLE 2.—DAILY WAGES OF INDUSTRIAL WORKERS IN KOREA, BY NATIONALITY OF WORKER, BY INDUSTRY GROUP, AND BY GEOGRAPHICAL LOCATION

[Conversions made on basis of yen at par=approximately 50 cents]

Industry group and nationality	Geographical location[1]												
	Keikido	Chushinnando	Zenrahokudo	Zenranaundo	Keishohokudo	Keishonando	Kokaido	Heiannando	Heianhokudo	Kogendo	Kankyonando	Kankyohokudo	Average
Industrial and mining:													
Japanese	$0.98	$1.18	$1.03	$1.02	$0.88	$0.95	$1.04	$1.26	$1.05	$0.70	$1.10	$1.10	$1.02
Korean	.53	.49	.42	.52	.45	.40	.55	.68	.45	.47	.51	.62	.60
Chinese	.63	.34	------	------	.25	.85	.76	.60	.40	.65	------	.57	.56
Other	------	------	------	------	------	------	.38	------	------	.50	------	------	.44
Civil engineering:													
Japanese	------	------	------	1.00	1.47	.93	------	1.75	1.18	1.25	1.15	.65	1.17
Korean	------	------	------	.50	.56	.68	1.00	.80	.34	.50	.75	.66	.64
Chinese	------	------	------	------	.80	------	------	1.40	.43	------	------	.56	.80
Agricultural and pastoral:													
Japanese	------	------	------	------	1.00	------	------	------	------	------	------	------	1.00
Korean	------	------	------	------	.34	------	------	------	------	.42	------	------	.38
Chinese	------	------	------	------	------	------	------	------	------	.35	------	------	.35
Other	------	------	------	------	------	------	------	------	------	2.05	------	------	2.05
Aquatic:													
Japanese	.90	------	------	------	------	.70	------	------	------	.49	------	.77	.71
Korean	.40	------	------	------	------	.55	------	------	------	.32	------	.44	.43
Communication and transportation:													
Japanese	------	1.10	1.25	------	1.30	.84	------	------	1.20	------	1.25	1.18	1.16
Korean	------	.55	.65	------	.80	.60	------	------	.88	------	.43	.64	.65
Miscellaneous:													
Japanese	------	------	------	------	1.00	------	------	------	------	------	------	------	1.00
Korean	------	------	------	------	.34	------	------	------	------	------	------	------	.34
Average:													
Japanese	.94	1.14	1.14	1.01	1.13	.85	1.04	1.50	1.14	.81	1.17	.92	1.07
Korean	.47	.52	.53	.51	.50	.55	.77	.74	.55	.43	.56	.59	.56
Chinese	.63	.34	------	------	.53	.85	.76	1.00	.41	.50	------	.56	.62
Other	------	------	------	------	------	------	.38	------	------	1.28	------	------	.83

[1] Nationality of worker not reported in Chushinhokudo.

From the above table it seems that the Korean laborers in all cases receive lower wages than the Japanese laborers and sometimes also lower than the Chinese laborers. This may be explained by several factors. In the first place, many of the Korean workers have recently migrated to the cities from the farms, where wages are traditionally low. Secondly, Korean labor to-day is largely unskilled or but moderately semiskilled, due to lack of education on the part of Korean workers as compared with Japanese workers in Japanese cities. A comparative study of the education of these workers was made by the governor general's office in 1923, and the results are summarized in Table 3.

TABLE 3.—EDUCATION OF KOREAN AND JAPANESE LABORERS

Education	Per cent of 48,043 Korean workers in Korea	Per cent of 164,890 Japanese workers in Tokyo	Per cent of 167,670 Japanese workers in Osaka
High-school graduates	0.3	6.0	7.0
High-school students	.7	------	------
Common-school graduates	10.0	54.0	41.0
Common-school pupils	8.0	------	------
Village-school pupils	24.0	------	------
No education	57.0	8.0	7.0

Because of their meager education Korean workers have not that industrial training which modern factory work so often requires, and are therefore unable to command high wages. This gives rise to the complaint against them frequently made by Japanese industrialists, i. e., that the Koreans are mentally lazy and naturally inefficient. To attribute the mental lethargy of the Koreans to their biological nature is perhaps untenable, and the inefficiency of the Korean workers may be accounted for in other ways, such as their lack of education and industrial training.

That industrial inefficiency is closely related to education and training is plainly seen in the labor turnover in Korea. Certain data were recently gathered by the Government on the length of service of the 38,173 male and 9,870 female employees of 664 industrial establishments. Of these employees about 40 per cent have been in service less than 6 months, about one-third less than 2 years, and about one-fifth less than 5 years. This shows a high degree of instability of employment. A closer analysis has revealed the fact that labor turnover in Korea is highest in agricultural work and miscellaneous occupations where skill is not an important qualification for the job holder, and that shifting of occupations is therefore very common. As likely as not, separations and dismissals in these occupations are due to the whims of the employees or the prejudices of the management. On the other hand, in factories, postal service, and transportation labor turnover is relatively low, for training and experience are requisites for the employee, and a relatively high degree of stable employment is maintained.

In regard to social treatment of the Korean workers, industrial development in Korea has not proceeded far enough to apply the industrial laws of Japan, but the Government of Korea is endeavoring in various ways to improve the economic and social conditions of the working classes.

Forward-looking employers are also introducing welfare work for their employees. According to a statement by the social section of the Governor General's Office, the situation in 1923 was as follows: 189 companies provided workers' lodging houses; 186 furnished theatrical equipment, picnics, and other amusements; 40 provided outdoor sports and supplementary education for their employees; 112 designated physicians for medical attention to the workers and their families; 205 had sickness allowance, bonus, and profit-sharing systems; 103 provided mutual aid, consumers' cooperative stores, and savings departments. In spite of the above, the lot of the Korean worker is generally poor. As a rule his working hours are long, his working conditions unhygienic, and his remuneration inadequate.

The Agrarian Situation

As has been pointed out, Korean farmers occupy a far more important position in Korean economy than the industrial workers. Characteristic of Korean agricultural labor is an age-long struggle between landlordism and tenancy. The owners of land constitute an insignificant percentage of the total farming population, perhaps not over 4 per cent. The tillers of the soil, who are tenants of several types, comprise more than half of the agricultural population.

Through tradition and social usage, the system of land ownership has undergone significant changes coinciding with those in the economic and social history of the country. Land owning in Korea has passed through the common land system in the primitive period, and the public-land system in the feudal period, to the private-land system in the present era. Likewise, rent-paying customs originating in the ancient and medieval times, when rent was paid in labor, produce, or cash have evolved into the present system of tenancy, in which a tenant may either share the crops with the owner (metayer system) or pay cash. The terms of the tenancy are set forth either in a written contract or by a verbal agreement, according to local custom.

The rate of interest in rural Korea is exorbitant and the rent of land also seems very high. After paying interest and rent, the ordinary tenant has little left for himself and his family. In broad outline, the nature of the Korean agrarian problem resembles that of Japan and China, but in the Korean farming communities poverty is more general and more serious. The social section of the Governor General's Office recently studied 162,209 poor farming families in Korea and found that their average annual income is $54 per year and their average annual expenditure $56 per year, yielding an average deficit of $2 per family per year. This is a dark picture of the lower classes of the rural sections of Korea.

In the past, few cases of grievances were brought against Korean landlords by the farmers. Recently, however, education has become relatively more popular among the farmers, and ideas of emancipation and social equality are gradually being introduced from foreign countries along with industrialization, all of which lead to social unrest in rural Korea, and the farmers are beginning to agitate for a better economic and social status. Disputes between tenants and landlords are very common, as may be seen from Table 4:

TABLE 4.—TENANCY DISPUTES IN KOREA, 1920 TO 1928, BY CAUSE[1]

Cause of dispute	1920	1921	1922	1923	1924	1925	1926	1927	1928	Total
Number of persons involved in disputes	4,140	2,967	2,539	9,060	6,929	2,646	2,118	3,285	3,576	37,260
Termination or conveyance of tenure of tenancy	1	4	8	117	126	1	4	11	21	293
For reduction of rent	6	9	5	30	22	5	4	1	3	85
For payment of land tax by landlord	3	2	2	11	5		1	2		26
Litigation relating to tenancy			1							1
For remission of illegal fees	1	1		1	2			1		6
Transportation fees	1			2				1		4
Ill-feeling between landlord and tenant		2	1			1		1		5
Methods of fixing rent	1	6	1	6	2		6	4	1	27
For remission of land tax				2					1	3
Other	2	3	6	7	7	4	2	1	4	36
Total	15	27	24	176	164	11	17	22	30	486

[1] Memorandum to author, Ministry of Colonization, Tokyo, June 14, 1930.

During the period 1920 to 1929, the important causes of disputes were the status of tenancy, the reduction of rent, and the question of land tax. In their struggle against the landowners, the farmers frequently associate themselves with the city workers. Similarly, industrial workers occasionally receive assistance and sympathy from

the rural workers in the support of trade disputes in the cities. Because of their numerical strength, the farmers in Korea will exert much influence on the labor movement. If the farmers become better educated and if they grow less conservative they may in a large measure determine the vitality of the Korean workers' movement. In the future, the city worker and the farmer will go hand in hand in a common struggle for social and economic improvements.

Labor Movement and Labor Unrest

As ABOVE shown, unsatisfactory economic and social conditions have paved the way for manifestations of social unrest in sections of Korea. Sporadic attempts have been made by the comparatively more intelligent workers to improve their lot through organized action, such as parades and strikes.

Labor unions along modern lines have slowly come into existence. Some are loosely organized and die a natural death after a precarious existence of a short period; others, imbued with radical ideas, are forced to dissolve by the police. In July, 1930, the chief of police in Seoul told the writer that about 480 unions have been found to exist in Korea at one time or another, but few are strong and influential. In fact, doubt has been expressed whether there is a genuine desire on the part of substantial portions of the Korean workers for combination and organization among themselves. In 1924, the Civil Engineering Society of Korea included in its questionnaire a question on the need and functions of labor unions. Among those answering the questionnaire were a group of Japanese and Chinese workers who recognized the need of labor organizations and insisted upon the right to organize them, but on the other hand, many of the Korean workers were rather indifferent toward this question.

Evidence of large-scale labor organizations, however, is not lacking. Farmers have been active in organization for some years. In 1924 farmers' unions became conscious of the strength of their organization and planned for the consolidation of their unions. This resulted in the creation of the Federation of Farmers' Unions of Korea, which was national in scope and had several branches in the country. Three years later the consolidation movement extended to the cities, and many labor unions became affiliated with the federation. The resulting new organization adopted the name of General Labor Union of Korea, and claims a membership of about 65,000, including factory workers, employees in the civil engineering trades, farmers, and independent workers. It is alleged that the General Labor Union is socialistic and it is not yet recognized by the Government.

Disputes and strikes in recent years have been fairly common, as Table 5 will show. The principal labor disputes and strikes have arisen from the workers' demands for increase of wages or against reduction of wages, or for back pay. Economic strikes constitute the most important controversies between capital and labor, followed by strikes concerning the social treatment of the workers, either as to their personal comfort or the welfare of their families. The nature of most strikes in Korea is simple as the labor movement is yet in its infancy.

TABLE 5.—LABOR DISPUTES IN KOREA, 1912 TO 1928, BY NATIONALITY OF WORKER CAUSE, AND RESULT

Year	Number of cases	Nationality of worker				Cause			Result		
		Japanese	Korean	Chinese	Total number	Wages	Social treatment	Other	Successful	Failure	Settled by conciliation
1912	6	-------	1,573	-------	1,573	6	-------	-------	3	3	-------
1913	4	-------	420	67	487	4	-------	-------	3	1	-------
1914	1	-------	130	-------	130	1	-------	-------	1	-------	-------
1915	9	23	828	1,100	1,951	6	1	2	3	3	3
1916	8	8	362	88	458	7	1	-------	6	2	-------
1917	8	20	1,128	-------	1,148	6	1	1	4	1	3
1918	50	475	4,443	1,187	6,105	43	2	5	18	18	14
1919	84	401	8,283	327	9,011	76	4	4	12	35	37
1920	81	533	3,886	180	4,599	76	3	2	38	31	12
1921	36	11	3,293	99	3,403	30	1	5	14	18	4
1922	46	38	1,682	79	1,799	41	2	3	12	15	19
1923	72	53	5,824	164	6,041	64	2	6	22	49	1
1924	45	30	6,150	571	6,751	35	4	6	14	13	18
1925	55	49	5,390	261	5,700	31	8	16	24	22	9
1926	81	203	1,648	133	5,984	44	6	31	27	24	30
1927	94	16	9,761	746	10,523	68	7	19	32	31	31
1928	119	112	7,212	435	7,759	49	23	47	33	39	47
Total	799	1,972	62,013	5,437	73,422	587	65	147	266	305	228

Who are the prime movers in this labor movement, weak as it is? There are a small group of liberal thinkers and also a group of intelligent workers who for some years in the past have been agitating for a better social order. During the European War, industry and commerce expanded rapidly in Japan, and certain Japanese capitalists went into Korea for further industrial opportunities, and with them also went Japanese workers. As Japanese workers are by and large better informed of the labor movement in Japan and in the West than the Koreans, they frequently demand better treatment in the Korean factories under Japanese control. Very often when declaring strikes they seek the support and cooperation of the Korean workers. In this way the newcomers join hands with the old group in their struggle for the improvement of the relations between employers and employees. There was a short period, expecially between 1918 and 1920, when Japanese laborers in Korea, in close association with Korean workers, became conspicuously active in demonstrations and strikes. Thereafter, Japanese industrialists paid special attention to the Japanese workers in their employ, and the Japanese workers have become quiet in labor matters. Also, the Japanese-Korean Friendship Society's (*Naisen Yuwai Kai*) activities are along the line of improving the relations between employers and employees of these two nationalities.

Strikes in Korea usually involve a small number of workers and last a short time only, two or three days per strike being very common. Recently, however, a significant strike, the culmination of various disputes, occurred—the Genzan strike of January, 1929, which thus far has been the most complex and outstanding struggle between capital and labor in all Korea.

In November, 1925, the Federation of Labor Unions of Genzan was organized, and 28 labor unions, having a membership of about 1,350 men, principally transport workers of the region, became

affiliated therewith. In June, 1927, a dispute arose between the transport workers and their employers, the workers demanding equalization of wages, as well as increase in wages. Upon the employers' refusal to comply with this demand, a strike was declared and within one week all the principal demands of the workers were satisfactorily met by the employers. The workers felt so encouraged that they immediately took steps to organize in a closer way amd on a larger scale.

In September, 1928, a Japanese foreman of a Japanese petroleum company near Genzan was alleged to have flogged a Korean workman. This was seized by the Korean workers as an opportunity for better organization among themselves, as well as an occasion for demanding just treatment from the management. Because of the coronation ceremonies, the case was amicably settled in October through the agency of the local police. The principal terms of the settlement were the dismissal of the Japanese foreman, a subsidy to the strikers during the strike, the introduction within three months of a retirement pension system, accident compensation, and a minimum wage. In December, 1928, the company communicated to the workers its decision agreeing to enforce the agreement on retirement pension, accident compensation, and a minimum wage, but stated that the company would negotiate terms with the workers as individuals and not through their union.

The employer's refusal to recognize the union caused widespread opposition among the company's employees, and seems to have been the most immediate and direct cause of the strike which the Federation of Labor Unions of Genzan declared on January 14, 1929. The wharf coolies at once refused to unload cargo on incoming ships on that day. They were soon joined by 1,500 transport workers and the situation became increasingly grave. The local chamber of commerce acted as conciliator, but no agreement was reached, as the employers would not compromise. Intimidation and violence by the strikers were charged by the police and courts, and arrests were made. On April 21, the Federation of Labor Unions of Genzan was ordered by the police to close its doors and the strike ended. The direct economic losses of the strike were considerable. At its most serious stage, especially between January 14, and February 3, about 2,000 workmen were involved whose average daily wage was about 40 cents. There was a complete tie-up of cargo, which adversely affected shipping in Kobe, Shanghai, and Dalny. During the strike warehouses were closed and banking and general business were seriously interrupted.

On the surface the workers of Genzan lost their strike, but the effect of the strike on the Korean labor movement was far-reaching. During the strike labor bodies in Japan and China expressed sympathy with the strikers in Genzan, and fellow-workers in Korea sent financial aid to them. When the federation was dissolved by order of the police, the workers and their sympathizers at once realized the importance of further organization and immediately embarked upon the creation of a new organization known as the Labor Union of Kannan.

The Outlook

To REITERATE questions stated at the beginning of this article, it may again be asked, In which direction should Korea develop—that of agriculture or industry? In either case, how would the situation in Korea affect the economic and social situation in Japan and China? These questions have long engaged the close attention of thinkers in the Far East, but no positive answer is as yet forthcoming. One would surmise, however, that the Government of Korea would, for the present at least, lay more emphasis upon the development of agriculture than industry, the principal reasons for which may be briefly outlined.

If industries in Korea are to be developed, with the aim of ultimately becoming an industrial nation, many difficulties are in the way. Korea's natural resources, of course, are plentiful, especially coal deposits, and Korean labor is abundant, though largely unskilled and uneducated. But Korea lacks technical men, capital, and industrial experience. The industrial progress thus far accomplished is mainly due to Japanese initiative and control. The further industrialization of Korea would call for a large number of industrial experts and managers, principally from Japan. Their presence might tend to aggravate a certain racial antipathy which already exists in sections of Korea. Labor disputes and labor unrest in recent years have partially originated from ill feeling between Japanese employers and Korean employees based on nationality.

In addition, the question of marketing manufactured goods must also be considered. The home market in Korea and Japan may consume portions of the industrial output, but the bulk of Korean manufactured commodities must be dumped into the markets in China, especially Manchuria, which is Korea's next-door neighbor. Unfortunately, China is already flooded with Japanese goods. Under present circumstances, therefore, the further industrialization of Korea appears to be beneficial neither to Korea nor to Japan.

If, on the other hand, emphasis is placed upon the development of Korean agriculture, the prospects are brighter. Based upon Korean tradition, agriculture has been and still is the chief occupation of her inhabitants, and so the Government has been planning to improve agriculture as the surest and most beneficial policy to increase the wealth of the country, as well as to improve the general well-being of her people. Consequently a program for improving the cultivation of rice is now being carried out which will cover a period of 12 years, beginning in 1926. This program will ultimately increase the rice fields by 857,500 acres, which will yield 40,672,000 bushels of rice per year, having a total value of $123,000,000. Out of this total yield, about 24,800,000 bushels of rice will be available for export every year, which will bring to Korea an annual income of $75,000,000. Korea to-day is growing not only enough rice to feed the home population, but a large quantity of rice available for export, principally to Japan, ranging from 24,800,000 to 29,760,000 bushels per year and having a total annual value of more than $100,000,000. All this wealth will directly or indirectly benefit the general population of Korea.

Theoretically, therefore, if Korea remains an agricultural country she may act as the granary of Japan. Japan's food problem will in the near future become less serious, and Japan may devote her talent and resources to industrialization. On the other hand, agricultural improvements in Korea may materially enrich all classes of the Korean people. Practically, however, many problems of international character are involved. Although Koreans to-day still own far more land than the Japanese, there is a tendency of land ownership slowly passing to the Japanese. Poverty in sections of Korea seems to be increasing. The Korean Government is apparently encouraging Japanese emigrants to Korea to become permanent settlers, in order to alleviate the pressure of population in the islands as well as to develop arable land in Korea, but the consequences of this move seem to be detrimental to the Koreans. It is estimated that for every Japanese who moves into Korea, about five Koreans are forced to leave the country, as the average size of the Korean farm is about two and a half acres, whereas the land granted to the Japanese settlers, as an incentive to emigration, is either 10 or 20 acres per family.

The results of this assisted emigration are the driving away from Korea of a large number of the poorer class of Koreans. Of course, not all the Korean emigrants are thus forced out of their own country, but many of them are. They emigrate either to Japan as laborers or to North China, especially Manchuria, as farmers. In either case the consequences are unfortunate. Over 170,000 Koreans are now living in parts of Japan, and many of them have entered into keen competition with Japanese workers for employment. In Osaka, Fukuoka, Yamaguchi, and Tokyo, where the Koreans concentrate, large numbers of Japanese workers are thrown out of employment, as Korean labor is considerably cheaper. The Japanese Government finds it necessary to restrict Korean emigration to Japan. Recently, in view of the widespread unemployment situation in the islands, the presence of numerous Koreans there is especially detrimental to the working population of Japan.

It is estimated that about 800,000 Koreans are now settled in Manchuria. Some have become naturalized citizens of China, while others remain Japanese subjects. Certain groups of Koreans have moved into regions where the population is already dense and the struggle for existence severe, and their presence intensifies the struggle for livelihood between the Koreans and Chinese. Socially, illicit trade, such as the smuggling of opium, morphine, and heroin by the Japanese, Chinese, and Koreans, has handicapped the Chinese authorities as to an honest and efficient prohibition because of extraterritorial privileges. These are only a few of the significant ramifications which arise directly or indirectly from the problems of Korean labor, but they serve to indicate the nature of these intricate problems. They are not Korean domestic issues touching only upon Korean economy; they are international and have an important bearing upon the economic and social situation in the Far East.

UNEMPLOYMENT CONDITIONS AND RELIEF

The President's Emergency Committee For Employment

ON OCTOBER 21, 1930, it was announced that Col. Arthur Woods, former police commissioner of New York City, had been selected as director of the President's Emergency Committee for Employment. This announcement followed a meeting of a Cabinet committee on unemployment composed of Secretary of Commerce Lamont (chairman), Secretary of Labor Davis, Secretary of the Interior Wilbur, Secretary of War Hurley, Secretary of the Treasury Mellon, and the governor of the Federal Reserve Board, Mr. Eugene Meyer. Subsequent appointments to the committee include that of Fred C. Croxton, as one of three or more regional heads who will coordinate the work in different parts of the country; Edward Eyre Hunt, as secretary of the committee; Edward L. Bernays, as counsel on public relations; Dr. Lillian Moller Gilbreth, to head the women's division; Porter Lee, to collect information on the welfare aspects of unemployment; and Bryce Stewart, to aid in statistical analysis.

It is not intended that the President's emergency committee shall give direct aid to the unemployed, but rather that its membership shall act in the capacity of coordinators of work already undertaken or being organized by local agencies, and to disseminate information as to what is being done in one locality as a guide for efforts in another locality. Colonel Woods states that the committee will cooperate with three groups, governmental (Federal, State, county, and municipal), industrial, and public.

As the name of the committee implies, the work which Colonel Woods is undertaking is primarily that of finding jobs for idle men. Colonel Woods is quoted as stating at a press conference:[1]

"The chief purpose of the organization is to find jobs for idle men, and the secondary one to advise communities in supplying relief for the needy."

Unemployment in Foreign Countries

IN presenting the following data regarding unemployment conditions in foreign countries, it is very important to note that, as a rule, the available statistics indicate the trend rather than the gross amount of unemployment. It is obvious that nothing less than a compulsory system of registration of all working people who are out of work, regardless of occupation, would make it possible for any country to know with certainty the exact number of unemployed

[1] See New York Times, Oct. 25, p. 4.

at any given time. In countries such as Germany and Great Britain, where compulsory unemployment insurance is in force and where an effort is made to secure complete registration of the unemployed in public labor exchanges, the resulting statistics may be accepted as fairly representative of the country as a whole, although even in these countries there are certain classes of labor that do not fall under the provisions of the insurance system and are not so situated that they register with public exchanges upon becoming unemployed. In other countries, where the reported unemployment statistics cover only the members of particular trade-unions or the members of unemployment benefit societies, the resulting figures may represent only a small proportion of the total persons unemployed.

Table 1 shows by countries the total number of unemployed reported for the latest month in 1930 for which statistics are available and for the corresponding month in 1929. All countries are included for which authoritative figures are available. The percentage figures apply, of course, only to the particular group indicated and, as already noted, may not be applicable to the working population as a whole.

TABLE 1.—STATISTICS OF UNEMPLOYMENT IN FOREIGN COUNTRIES[1]

Country and group of unemployed	Month	Number of unemployed		Per cent of unemployed	
		1929	1930	1929	1930
Australia: Trade-unionists unemployed	June	40,996	80,595	10.0	18.5
Austria: Persons receiving benefit	August	101,845	156,145	.....	.....
Belgium—Members of unemployment insurance societies:					
Wholly unemployed	July	4,037	15,302	.6	2.4
Partially unemployed	do	16,452	48,580	2.6	7.7
Canada: Trade-unionists unemployed	August	7,159	18,232	3.5	9.3
Czechoslovakia: Unemployed trade-unionists in receipt of benefit	June	19,436	37,853	1.9	3.4
Danzig: Unemployed registered	July	9,007	15,330	.....	.....
Denmark: Trade-unionists unemployed	August	25,164	26,232	9.1	9.1
Estonia: Unemployed registered	July	780	762	.....	.....
Finland: Unemployed registered	do	1,188	4,026	.....	.....
France: Persons receiving benefit	September	385	988	.....	.....
Germany: Unemployed registered	do	1,323,603	2,983,000	.....	.....
Great Britain: Persons registered	do	1,181,862	2,114,955	.....	.....
Hungary—Trade-unionists unemployed:					
Christian (Budapest)	July	801	920	.....	.....
Social-Democratic	do	13,964	19,081	9.3	13.2
Irish Free State: Insured unemployed registered	do	[2] 21,834	23,393	7.8	8.2
Italy—Persons registered:					
Wholly unemployed	do	201,868	342,061	.....	.....
Partially unemployed	do	13,503	24,209	.....	.....
Latvia: Unemployed registered	do	1,205	607	.....	.....
Netherlands: Insured unemployed registered	August	12,701	30,713	3.3	7.9
New Zealand: Trade-unionists unemployed	May	5,276	5,884	9.3	10.9
Norway: Unemployed registered	August	12,493	12,923	.....	.....
Poland: Unemployed registered	September	81,848	173,012	.....	.....
Rumania: Unemployed registered	July	3,909	23,236	.....	.....
Saar: Unemployed registered	do	3,238	7,095	.....	.....
Sweden: Trade-unionists unemployed	do	20,048	26,439	6.5	7.5
Switzerland—Insured unemployed:					
Wholly unemployed	do	.....	4,751	[3].7	1.9
Partially unemployed	do	.....	15,112	[3]1.0	6.2
Yugoslavia: Unemployed registered	do	7,652	7,236	.....	.....

[1] For sources, see Table 2. [2] August. [3] June.

The data in the table show a continued and marked increase in unemployment in practically all of these widely scattered countries.

Exceptions occur only in the case of a few of the less industrialized countries such as Denmark, Estonia, Lavia, and Yugoslavia. In Denmark, while the number of unemployed trade-unionists reported increased, the ratio of unemployed to total union membership remmained stationary at 9.1 per cent of the total.

The increase in unemployment has been particularly serious in Germany and Great Britain, the registered unemployed in both these countries having increased approximately 100 per cent in the period between September, 1929, and September, 1930. Several other countries—Belgium, Canada, Czechoslovakia, Finland, France, the Netherlands, Poland, Rumania, and Switzerland—show as great and in several instances a much greater percentage increase in the registration of the unemployed than either Great Britain or Germany, but the possible significance of these changes is to some extent obscured by the fact that the group of wage earners covered by the report is usually only a relatively small sample of the wage-earning population as a whole.

Table 2 presents detailed statistics regarding the monthly changes in employment, by countries, from May, 1929, to the latest month for which information is available.

TABLE 2.—STATISTICS OF UNEMPLOYMENT IN FOREIGN COUNTRIES[1]

Date (end of month)	Australia		Austria	Belgium				Canada	
	Trade-unionists unemployed		Compulsory insurance, number unemployed in receipt of benefit	Unemployment insurance societies				Trade-unionists unemployed	
				Wholly unemployed		Partially unemployed			
	Number	Per cent		Number	Per cent	Number	Per cent	Number	Per cent
1929									
May	[2]	.....	130,469	2,382	0.4	8,686	1.4	7,750	4.0
June	40,996	10.0	110,266	2,559	.4	11,194	1.8	5,723	2.9
July	[2]	.....	104,399	4,037	.6	16,452	2.6	6,003	3.0
August	[2]	.....	101,845	3,200	.5	15,614	2.5	7,159	3.5
September	52,480	12.1	104,947	3,492	.5	16,714	2.6	7,654	3.7
October	[2]	.....	125,850	3,261	.5	13,930	2.2	12,716	6.0
November	[2]	.....	167,487	6,895	1.1	13,176	2.1	19,832	9.3
December	56,801	13.1	226,567	15,761	2.4	29,309	4.6	24,289	11.4
1930									
January	[2]	.....	273,197	22,542	3.5	25,782	4.0	22,795	10.8
February	[2]	.....	284,543	16,085	2.6	31,222	4.9	24,175	11.5
March	63,144	14.6	239,094	14,030	2.2	28,469	4.5	22,912	10.8
April	[2]	.....	192,477	13,715	2.2	36,605	5.8	18,581	9.0
May	[2]	.....	162,678	12,119	1.9	38,761	6.1	20,424	10.3
June	80,595	18.5	150,075	12,226	1.9	41,336	6.5	21,380	10.6
July	.....	.....	153,188	15,302	2.4	48,580	7.7	18,473	9.2
August	.....	.....	156,145	.....	.....	.....	.....	18,232	9.3

[1] Sources: League of Nations—Monthly Bulletin of Statistics, No. 6, June, 1930, No. 8, August, 1930; International Labor Office—International Labor Review, July, August, September, 1930; Canada—Labor Gazette, September, October, 1930; Great Britain—Ministry of Labour Gazette, January, August, September, October, 1930; Austria—Statistische Nachrichten, Sept. 27, 1930; Australia—Quarterly Summary of Australian Statistics, September, 1930; Germany—Statistische Beilage zum Reichsarbeitsblatt, 1930, nr. 16, 22, 25; Reichs Arbeitsmarkt\Anzeiger, 1930, nr. 23; Switzerland—Wirt. u. Social. Mitteilungen, September, 1930; Poland—Wiadomósci Statystlyczne, 1930; Norway—Statistiske Meddelelser, nr. 7 og. 8, 1930; Netherlands—Maandschrift, 1930.

[2] Not reported.

TABLE 2.—STATISTICS OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Czechoslovakia		Danzig (Free City of)	Denmark		Estonia	Finland	France	Germany
	Trade-union insurance funds—unemployed in receipt of benefit		Number of unemployed registered	Trade-union unemployment funds—unemployed		Number unemployed remaining on live register	Number of unemployed registered	Number of unemployed in receipt of benefit	Number of unemployed registered
	Number	Per cent		Number	Per cent				
1929									
May	21,866	1.9	11,135	29,671	10.8	2,169	1,624	570	1,349,833
June	19,436	1.9	8,876	27,398	10.0	1,110	1,157	394	1,260,044
July	16,859	1.6	9,007	26,621	9.6	780	1,188	399	1,251,452
August	18,674	1.8	8,958	25,164	9.1	609	1,859	403	1,271,990
September	19,468	1.9	9,296	24,175	8.7	902	2,710	385	1,323,603
October	16,248	1.5	10,664	28,194	10.1	3,065	4,997	396	1,557,146
November	17,108	1.6	13,146	36,302	13.0	5,288	9,495	577	2,035,667
December	30,170	2.8	16,198	62,563	22.4	6,116	8,716	817	2,850,849
1930									
January	39,199	3.6	19,282	55,876	20.3	5,608	12,696	1,484	3,217,608
February	40,550	3.6	21,153	59,363	21.0	4,580	11,545	1,683	3,365,811
March	45,567	4.0	20,376	47,109	15.6	3,575	10,062	1,630	3,040,797
April	42,664	3.7	18,371	33,471	11.8	2,227	7,274	1,203	2,786,912
May	41,098	3.8	16,232	27,966	9.4	2,065	4,666	859	2,634,718
June	37,853	3.4	14,975	24,807	8.7	910	3,553	1,019	2,640,681
July			15,330	[3] 26,200	[3] 9.1	762	4,026	856	2,765,258
August				[3] 26,232	[3] 9.1			964	2,883,000
September								988	[3] 2,983,000

Date (end of month)	Germany					Great Britain and Northern Ireland			
	Trade-unionists					Compulsory insurance			
	Wholly unemployed		Partially unemployed		Number unemployed in receipt of benefit	Wholly unemployed		Temporary stoppages	
	Number	Per cent	Number	Per cent		Number	Per cent	Number	Per cent
1929									
May	419,373	9.1	315,191	6.8	1,010,781	900,562	7.6	276,922	2.3
June	393,749	8.5	308,699	6.7	929,579	884,549	7.4	279,108	2.4
July	395,202	8.6	315,739	6.9	863,594	881,189	7.4	296,318	2.5
August	410,481	8.9	322,824	7.0	883,002	918,550	7.7	280,332	2.4
September	442,312	9.6	315,150	6.8	910,245	937,795	7.9	265,627	2.2
October	498,604	10.9	319,489	7.0	1,061,134	992,769	8.2	261,711	2.2
November	634,790	13.7	351,947	7.6	1,387,079	1,061,618	8.8	263,987	2.2
December	922,681	20.1	389,278	8.5	1,984,811	1,071,849	8.9	272,371	2.2
1930									
January	1,004,787	22.0	501,950	11.0	2,482,648	1,183,974	9.8	336,474	2.8
February	1,076,441	23.5	593,380	13.0	2,655,723	1,211,262	10.0	371,840	3.1
March	995,972	21.7	576,153	12.6	2,347,102	1,284,231	10.6	409,785	3.4
April	926,831	20.3	553,098	12.1	2,081,068	1,309,014	10.8	451,506	3.8
May	895,542	19.5	552,318	12.0	1,889,240	1,339,595	11.1	516,303	4.2
June	896,465	19.6	578,116	12.6	1,834,662	1,341,818	11.1	569,931	4.7
July	930,777	20.5	631,903	13.9	1,900,961	1,405,981	11.6	664,107	5.5
August					1,947,811	1,500,990	12.4	618,658	5.1
September					[4] 1,962,233	1,579,708	13.1	608,692	5.0

[3] Provisional figures.

[4] Sept. 15, 1930 (preliminary).

TABLE 2.—STATISTICS OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Great Britain	Hungary			Irish Free State		Italy		Latvia
	Number of persons registered with employment exchanges	Trade-unionists unemployed			Compulsory insurance—unemployed		Number of unemployed registered		Number unemployed remaining on live register
		Christian (Budapest)	Social-Democratic		Number	Per cent	Wholly unemployed	Partially unemployed	
			Number	Per cent					
1929									
May	(2)	787	13,266	8.8	24,256	8.6	227,682	8,713	1,433
June	1,117,807	787	13,921	9.5	(2)		193,325	10,970	1,236
July	1,154,129	801	13,964	9.3	(2)		201,868	13,503	1,205
August	1,155,803	833	14,007	9.5	21,834	7.8	216,666	19,650	1,008
September	1,181,862	783	13,922	9.5	(2)		228,831	16,835	1,582
October	1,234,388	967	14,215	9.7	(2)		297,382	17,793	4,204
November	1,285,458	1,033	15,910	10.3	26,186	9.2	332,833	19,694	8,479
December	1,510,231	1,107	19,181	13.0	(2)		408,748	21,349	8,134
1930									
January	1,491,519	1,161	21,533	14.5	31,592	11.1	466,231	23,185	9,263
February	1,539,265	1,120	21,309	14.8	(2)		456,628	26,674	8,825
March	1,677,473	983	21,016	14.6	(2)		385,432	28,026	6,494
April	1,698,386	906	20,139	13.7	26,027	9.2	372,236	24,305	3,683
May	1,770,051	875	19,875	13.6	(2)		367,183	22,825	1,421
June	1,890,575	829	18,960	13.0	(2)		322,291	21,887	779
July	2,011,467	920	19,081	13.2	23,393	8.2	342,061	24,209	607
August	2,039,702				(2)				
September	2,114,955								

Date (end of month)	Netherlands		New Zealand		Norway			Poland
	Unemployment insurance societies—unemployed		Trade-unionists unemployed		Trade-unionists (10 unions) unemployed		Number unemployed remaining on live register	Number unemployed registered with employment offices
	Number	Per cent	Number	Per cent	Number	Per cent		
1929								
May	10,820	3.0	5,276	9.3	4,694	12.5	18,000	119,877
June	9,987	2.6	(2)		4,337	11.3	14,547	105,065
July	12,030	3.1	(2)		3,999	10.2	12,417	97,297
August	12,701	3.3	5,226	9.4	4,245	10.7	12,493	90,094
September	12,517	3.2	(2)		4,854	12.1	15,525	81,848
October	13,639	3.5	(2)		5,682	14.0	18,420	91,035
November	20,941	5.3	3,018	5.6	6,256	15.4	20,546	125,066
December	48,609	12.3	(2)		7,693	18.9	22,092	185,314
1930								
January	56,535	13.9	(2)		7,786	19.0	22,549	241,974
February	50,957	12.5	4,348	8.5	7,851	18.9	22,974	274,708
March	34,996	8.6	(2)		7,503	17.8	22,533	289,469
April	28,421	6.9	(3)		6,701	15.8	19,829	271,225
May	26,211	6.3	5,884	10.9	5,239	12.2	16,376	224,914
June	23,678	5.5				10.8	13,939	204,982
July	29,075	6.7					11,997	193,687
August	[3]30,713	[3]7.9					12,923	[5]176,810
September								[6]173,012

[2] Not reported. [3] Provisional figures. [4] Last week in August. [5] Sept. 6, 1930.

TABLE 2.—STATISTICS OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Poland				Rumania	Saar Territory	Sweden	
	Industrial workers							
	Extractive and manufacturing industries wholly unemployed		Manufacturing industries partially unemployed		Number unemployed remaining on live register	Number unemployed registered	Trade-unionists unemployed	
	Number	Per cent	Number	Per cent			Number	Per cent
1929								
May	104,200	11.6	135,608	25.1	6,819	(1)	24,452	8.1
June	91,000	10.2	98,708	18.6	5,849	3,762	21,764	7.4
July	84,300	9.7	89,639	17.7	3,909	3,238	20,048	6.5
August	77,500	9.0	82,297	15.7	3,714	3,398	19,914	6.3
September	68,700	8.0	70,055	13.2	5,171	3,990	22,271	7.2
October	76,818	8.9	84,060	15.3	5,481	5,025	27,529	8.6
November	108,200	12.5	94,890	17.5	6,958	6,408	33,581	10.4
December	166,240	19.5	94,601	18.5	6,866	10,515	53,977	16.6
1930								
January	219,333	24.3	108,812	24.8	12,622	11,307	45,636	14.2
February	251,627	27.5	120,058	28.4	15,588	11,949	45,460	13.2
March	265,135	28.7	120,844	28.9	13,045	8,882	42,278	12.5
April	246,670	27.0	113,594	26.9	13,412	7,522	38,347	11.1
May	201,116	23.0	104,469	24.2	25,096	7,362	28,112	8.3
June	182,600	21.6	94,375	22.2	22,960	6,330	28,956	8.1
July					23,236	7,095	[3] 26,439	7.5
August								

Date (end of month)	Switzerland				Yugoslavia
	Unemployment funds				
	Wholly unemployed		Partially unemployed		Number of unemployed registered
	Number	Per cent	Number	Per cent	
1929					
May	(1)	(1)	(1)	(1)	10,583
June	(1)	0.7	(1)	1.0	9,017
July	(1)	(1)	(1)	(1)	7,652
August	(1)	(1)	(1)	(1)	5,790
September	(1)	.8	(1)	.9	6,755
October	(1)	(1)	(1)	(1)	4,739
November	(1)	(1)	(1)	(1)	5,026
December	12,309	4.2	9,805	3.3	5,663
1930					
January	10,523	4.4	10,710	4.4	8,508
February	9,971	4.1	11,445	4.7	9,437
March	7,882	2.6	12,642	4.2	9,739
April	5,203	2.1	12,755	5.3	12,052
May	5,356	2.2	13,129	5.4	8,704
June	5,368	1.7	17,688	5.7	6,991
July	4,751	1.9	15,112	6.2	7,236
August					

[1] Not reported.

[3] Provisional figures.

Industrial and Unemployment Relief Legislation in Australia

AUSTRALIA is undergoing a severe industrial depression, which she is attempting to meet by action along several lines. The Commonwealth has adopted various fiscal and tariff measures and is considering a cut in the salaries of all Federal officials, while individual States are carrying out policies which differ widely according to the party in power. So far, action has been along two distinct lines—measures to lengthen hours, to lower wages, and to do away with certain safeguards which the workers have enjoyed for years, and the institution of unemployment relief schemes with the levying of special taxes to provide money for carrying them out. New South Wales has gone further in the first direction than any other State, but the tendency is observable elsewhere. Queensland, which has had an unemployment insurance plan in operation for some years, finds it inadequate to the needs of the present situation, while Victoria and New South Wales, which have no such plans, are undertaking relief schemes in an effort to cope with unemployment.

New South Wales

THE full text of the act establishing the 48-hour week in New South Wales, given in the New South Wales Industrial Gazette for June, 1930, shows that in addition to the very thoroughgoing provisions for making the 48-hour week the standard working hours, there are three provisions upon which the workers look with considerable doubt. The employer is expressly permitted, in view of the prevailing unemployment, to "ration" work, requiring individual employees "or any number or proportion of them to remain away from work for such time per week or other period as will in his opinion result in the work available being shared as equally as practicable, or extending over a longer period of time," and during this lay-off the worker has no claim to wages. This provision is to remain in force for 12 months after the coming into effect of the act, or for such further period as may be proclaimed by the governor. A second provision declares that any award or agreement in force at the coming into effect of this act which prohibits piecework or contract work, or any other form of payment by results shall, to the extent of that prohibition, be void and of no effect, and any rule of a trade-union forbidding piecework or requiring its members to perform only a definite amount of work in any one day shall also be void. The third permits a committee or other wage-fixing body, when making an award, to take into consideration the probable economic effect of the award upon the community in general and the probable economic effects thereof upon the industry or industries concerned.

Reduction of Public Service Salaries

The term "public service," as used in this act, which is effective for one year ending June 30, 1931, applies to officers and employees of the following bodies: The railway commissioners for New South Wales, the water conservation and irrigation commission, the main roads board of New South Wales, the Sydney harbor trust, the trustees of the Australian museum, and the forestry commission of New South

Wales. Provision is made for adding to this list such other boards, trusts, and public or municipal bodies as may be desired.

The act provides for a reduction of £8 6s. 8d. on each £100 of salary (8⅓ per cent), including in the term "salary" such emoluments as rent, fuel, rations, and the like. No married male officer's salary may be reduced below £300 ($1,460) per annum, and no salary of an adult officer shall be reduced below the amount of the declared adult male or female living wage in force at the time and applicable to the officer. No deduction is to be made from the salary of an officer under this act when his ordinary working hours have been increased to 48 per week, or when, in lieu of such an increase, his salary has by agreement been reduced one-twelfth.

The governor, judges, and certain other officials are exempt from the operation of this act, and the governor may exempt partially or completely other persons or classes of persons if he is satisfied that sufficient reason exists for such action. Careful provision is made for safeguarding the pension rights of employees who are affected by the act.

Unemployment Relief Tax and Prevention and Relief of Unemployment Acts

The first of these acts establishes a tax of 3d. per £1 (1¼ per cent) of net assessable income for all persons and companies liable to income tax, and upon the wages of all others, the amount thus raised to be paid into the unemployment relief fund created by the second act. Workers employed at rates less than 30s. ($7.30) a week are exempt, and the usual exemptions are made as to income from pensions, charitable relief, and similar sources. The tax upon wages is to be made by means of stamps which the employer must secure from the Government, deducting their value from the employee's wages before these are paid over.

The prevention and relief of unemployment act creates a council to deal with the whole subject of unemployment, provides for the establishment of an unemployment relief fund, and makes the necessary regulations as to the tax for unemployment relief. The provisions concerning the council and the relief fund are operative only until June 30, 1931.

The council is to consist of eight members, of whom three are members of the Government, holding their positions ex officio, and the others are appointed by the governor. They are given wide powers to formulate schemes for the absorption of the unemployed in public works or private enterprises, to investigate and pronounce upon schemes for relief work and for training the unemployed, to approve grants from the unemployment relief fund for suitable purposes, and the like. One provision gives the governor, acting in conjunction with the council, power to alter conditions fixed by agreement or by award upon any work which they class as relief work.

Where the governor on the advice of the council or of the minister declares by notification published in the Gazette a work to be work provided for the relief of unemployment, all wages, hours, and mode, terms, and conditions of employment of any person employed upon such work shall be such as the minister may from time to time direct.

The provisions of this section shall take effect notwithstanding the conditions of employment, whether statutory or otherwise, or of any award or industrial agreement.

Acting upon this authorization the governor on July 21 published a list of public works which he declared to be works for the relief of unemployment, and on these wages were to be paid at an hourly rate which would amount to £4 2s. 6d. ($20.07) for a week of 48 hours. No person, however, might be employed for more than a maximum of 40 hours per week within the metropolitan area, nor for more than 35 hours per week outside it. According to the Sydney Morning Herald of August 12 the organized workers objected strongly to this declaration.

A deputation from the labor council will wait on the minister for labor to-day to protest against the action of the governor in declaring public works as relief works. The council contends that the decision of the governor will lead to a breakdown of award rates. Officers of the council point out that while the award rate for railway workers is £5 18s. 6d. [$28.83], under the relief work scheme they will receive £3 8s. 5d. [$16.65].

The governor, however, maintained his stand, and on the 15th the Herald reports that the employees' representatives had the day before resigned from the unemployment relief council as a protest against the policy of the governor in declaring public works to be relief works.

Queensland

In April the Queensland Government undertook to establish a scheme of relief works for the unemployed, using for this purpose public works to be carried out by the various government departments and by local authorities. Such works must be of developmental character, and such as would not ordinarily be carried out in the near future. Only those who had been bona fide residents of Queensland for at least one year would be given employment. Wages were to be 10s. ($2.43) a day, with an extra allowance of 2s. (49 cents) a day for married men or those with dependents. Funds would be raised by a levy on wages, salaries, and other income, and until suitable legislation could be passed for this purpose the Government would advance the necessary funds as a loan.

Upon its assembly in July, the Queensland Parliament passed an unemployment relief tax act, which was assented to July 29 and became operative August 1. The terms of the act are given in the Queensland Industrial Gazette for August, 1930. The tax is to be levied on wages, salaries, and income of every description, with such minor exemptions as savings bank interest, invalid and old-age pensions, workers' compensation payments, war pensions and gratuities, State children's allowances, unemployment insurance payments, and Government rations. The tax is to be 3d. for every £1 of income (1¼ per cent), and for fractional parts of £1, 1d. for each 6s. 8d. (1¼ per cent). In the case of wages, the employer is bound to deduct the tax from the employee's earnings before paying them over; in the case of income from other sources, the methods for collecting the regular income tax are used.

The tax thus raised is to be paid into an unemployment relief fund, from which such grants in aid of relief work are to be made as

the minister in charge considers wise. Unlike the act of New South Wales, this contains a special authorization for the use of the fund in relieving unemployed woman workers:

> Such portion of the said fund as the minister may in his discretion determine, to be applied in and for the relief of unemployment in respect of female workers, and/or in aid of the distress among female workers; and in regard to the administration of this provision a special board may be established.

Provision is made for establishing central and local relief boards to administer the act, and its duration is fixed at one year; it may, however, be extended by an order of the governor in council for such length of time as is considered necessary.

It is estimated that £800,000 ($3,893,200) will be raised under the terms of this act. At the time it went into effect the Minister of Labor stated that already employment was being found in unemployment relief schemes for more than 5,000 men, and that this number would probably soon show a marked increase, as a number of applications from local authorities concerning relief work enterprises were under investigation.

Victoria

VICTORIA has also passed a law, operative for one year from July 1, 1930, to provide for unemployment relief. The Australian Worker for July 2 gives a brief summary of some of its terms. Funds are to be raised by a stamp tax on wages up to £6 ($29.20) a week, and a special tax on incomes of higher amounts. Only workers receiving less than 30s. ($7.30) a week are exempt. Salaries and wages include commission, bonus, and allowances of any kind paid to any employee. The responsibility for the payment of the stamp tax is upon the employer.

According to a statement quoted in the Queensland Industrial Gazette, the Victorian Government expects to raise £750,000 ($3,649,875) through this tax, and in addition large contributions are expected from the general Government and from municipal bodies. The amount is to be used for carrying on relief works for the benefit of the unemployed, who, at the beginning of July, were estimated to number between 25,000 and 30,000.

Unemployment Among Trade-Union Members in Australia

THERE are no authoritative statistics as to the extent of unemployment among unorganized workers in Australia, but the Government publishes each quarter the percentage of unemployment among union members, furnished by trade-union secretaries. These figures show the percentage of members out of work for three days or more during a specified week of the quarter, not including those who are idle because of strikes or lockouts. The following table, showing the percentages of unemployment for the first two quarters of the current year, is taken from Bulletin No. 120 of the Commonwealth Bureau of Census and Statistics.

PERCENTAGE OF TRADE-UNION MEMBERSHIP UNEMPLOYED IN SPECIFIED QUARTER

State	Quarter ending—	
	March 31, 1930	June 30, 1930
New South Wales	16.3	21.0
Victoria	14.1	17.6
Queensland	8.4	10.1
South Australia	18.6	21.4
Western Australia	15.1	18.7
Tasmania	7.5	18.9
Total for Commonwealth	14.6	18.5

At the end of March the membership of the unions reporting was 432,464 and the number unemployed was 63,144; at the end of June the membership was 435,239 and the number unemployed was 80,595.

Facilitating the Construction of Public Works in Great Britain

DURING its recent session the English Parliament passed an act simplifying the process by which public authorities might set in operation works designed to furnish employment to the unemployed. In a circular issued by the Ministry of Health, given in the Ministry of Labor Gazette for September, 1930, the aims of the act are summarized:

> The object of the act is to expedite the provision of work for the relief of unemployment—
>
> 1. By introducing a simpler and speedier method for obtaining the necessary powers for works in cases in which local acts are now required;
>
> 2. By enabling land to be acquired compulsorily by means of an order confirmed by the appropriate minister; and,
>
> 3. By giving similar compulsory powers to highway authorities to acquire easements for bridges over or under land vested in statutory undertakers or in local authorities.

Under the first clause a local authority, instead of being obliged to secure power by a private bill passed through Parliament, which was a slow and sometimes uncertain process, may submit to the proper minister a draft scheme, which is subject to confirmation by Parliament. It is stipulated that the works proposed must materially contribute to the relief of unemployment, and that this relief must be materially expedited by proceeding under the act instead of by a private bill. The second section provides for a simplified procedure for enabling local authorities to acquire land for the purposes of such works. The new powers extend to cases in which compulsory powers might be obtained in some less expeditious way, to the provision of airdromes, the provision of open spaces by metropolitan borough councils, and to the provision of municipal buildings.

Other sections facilitate the procedure of acquiring land for road making, even though the proposed road is not "arterial," and hasten proceedings under the acts dealing with the electricity supply. The circular stresses the need for prompt action, so that as much work as possible may be provided for the coming winter.

RECREATION

Development of Movement for Utilization of Workers' Spare Time in Italy

A REVIEW of the activities of the Opera Nazionale Dopolavoro, the Italian society whose object is to interest the people in improvement of their spare time, from its organization in 1926 to the end of 1929, has been issued by the director general of the society. From an outline of the report in Il Lavoro Fascista, July 30, 1930, the following statements are taken.

Membership in the organization at the end of each year was as follows: In 1926, 280,584; in 1927, 538,337; in 1928, 882,589; in 1929, 1,445,226. The number of female members in 1929 was 115,509. In 1926, 74,000 workers engaged in excursions and sports; in 1927, 443,000; in 1928, 1,945,000; in 1929, 3,550,000. The number of workers connected with the organization in 1926, was 116,167; in 1927, 248,430; in 1928, 445,228; in 1929, 921,213.

Most of the societies have headquarters or a building of their own, called the Dopolavoro House, where their meetings are held. Of 15,189 recreational societies and institutions existing in Italy, over 4,221 are affiliated with the Dopolavoro and 2,700 others are members of it. In 5,010 of the 7,915 communes in Italy Dopolavoro groups are to be found. In 1930 efforts are to be made to extend the influence of the societies, especially in the agricultural districts.

The number of societies and the number of persons engaged in specified activities in 1926, the year of organization, and in 1929, are shown in the following table:

NUMBER OF SOCIETIES AND PERSONS ENGAGED IN SPECIFIED ACTIVITIES, 1926 AND 1929

Activity	Number of societies		Number of persons	
	1926	1929	1926	1929
Sports	467	3,554	1,563	53,438
Excursions	467	3,968	975	28,124
Theatricals	113	1,095	635	9,980
Music, etc	640	2,468	1,025	32,708
Study of folk lore	87	2,229	1,249	18,486
Other educational classes	[1] 157	382	[1] 590	4,577

[1] In 1927.

The report closes with the statement that through the efforts of the Dopolavoro general education is being diffused, the excursions which have been conducted in collaboration with the Italian Excursion Federation have kept people out of doors, and the sports in which they have engaged have developed the race physically.

HANDICRAFTS

Revival of Handicrafts in Sweden[1]

UP TO the nineteenth century the Swedish people, like other peoples in Europe, largely made their own clothing, furniture, cooking utensils, and various implements and tools at home. During generations the people acquired a high degree of skill and taste in these crafts, known as household or cottage industries. Some of the ancient pillowcases, blankets, towels, tapestries, etc., that have been preserved to the present day reveal fine workmanship, clever technique being combined with fine color selection. The yarns were spun and woven by hand and dyed with colors obtained from leaves, bark, moss, heather, etc., the "nature" colors thus obtained being brilliant and lasting.

With the introduction of machinery in the beginning of the nineteenth century, however, all the articles produced at home could be manufactured much cheaper in factories. Machine-made articles were imported from abroad in styles greatly differing from those made at home, which came to be regarded as old-fashioned and entirely out of date. As a result the handicrafts almost entirely disappeared.

Toward the close of the nineteenth century, however, certain students of antiquity and folklore under the leadership of Dr. Arthur Hazelius became interested in the old handicrafts. They started to collect old woven articles such as pillows, tapestries, etc., which had long been lying forgotten in the chests of the peasants, and tried to make the people appreciate their beauty and to interest them in reviving the ancient handicrafts. The collected articles were placed in the museums, and several associations were formed for the promotion of handicraft work. The agricultural societies of Sweden were from the beginning greatly interested in this movement, which, they perceived, was of importance to the rural population, inasmuch as the work might be done in the house during the long winter months when no other agricultural work could be performed, and in this way the movement might help to relieve the winter unemployment among the rural population.

Formation of first Swedish handicraft association.—At an exhibition held in Stockholm in 1897, 24 of the agricultural societies of Sweden exhibited collections of school and home handicraft products. At this exhibition it was clearly perceived that there was a great field for the Swedish cottage industries, but that it was necessary to organize the same if really good results were to be obtained. In 1899, therefore, the Swedish Handicraft Association was founded in Stockholm, and proved to be a great aid to the Swedish household or cottage industries. The object of this association was to maintain a permanent exhibition of handicraft products in Stockholm, to sell such articles as had been approved by the association, to procure patterns, take orders, and,

[1] Digest of report from R. A. Boernstein, American Consul at Malmo, Sweden, under date of Aug. 14, 1930.

finally, to aid the agricultural societies in their work of developing handicraft in the various counties.

Local associations.—At the beginning the intention was that the Swedish Handicraft Association should act as an organization for the whole country, but it was soon found that local associations were necessary, and such associations were formed all over the country. One of these was the Malmohus County Handicraft Association, which was formed in 1905. The objects of this association are to sell handicraft articles for its members, to furnish patterns and raw materials for such articles to the members, and generally to work for the revival of handicraft in the county along the old lines. The membership fee of the association is one Swedish crown (27 cents), and there are no dues. Membership entitles one to assistance in choosing yarns, etc., for handicraft work, and patterns may be borrowed free of charge. At the present time 4,515 persons are members of the association.

Union of Swedish handicraft associations.—It was soon realized that cooperation between the various handicraft associations could be greatly promoted through some kind of central union, and for this reason the Union of Swedish Handicraft Associations was formed in 1912, almost all the handicraft associations joining it as members. The object of the union is to further cooperation between the various associations and to promote their joint interests.

Activities of handicraft associations.—The activities of the handicraft associations are both practical and educational. The business side, which is wholly self-supporting, is concerned with the production and sale of handicraft articles, with the purpose of giving work to the rural population. At present a staff of about 330 workers is maintained by the Malmohus County Handicraft Association, almost all of whom live in Malmohus County. The association buys the raw materials, which it furnishes to the workers, together with patterns and descriptions of the articles to be made, pays wages for the work, and receives the articles, which are sold at the association's salesrooms in Malmo and Helsingborg. For the year 1929 the turnover of these salesrooms, together with the turnover of the lottery which the association also maintains, was 333,663.48 crowns ($89,421.81), the turnover of the lottery alone being 32,545 crowns ($8,722.06). This lottery is held with a view to propaganda for home handicraft, inasmuch as all prizes won are given in the form of handicraft articles.

The educational phase of the handicraft association's activities has as its object the furthering of handicraft in Malmohus County "on the basis of its ancient traditions." To this end the association maintains a permanent school of weaving at Malmo for the training of teachers of weaving, plain and fancy weaving and pattern designing being taught therein during seven winter months each year. Tuition is paid for these courses, but the amount received therefor does not cover the entire cost of maintaining the school, the remainder being paid through subsidies received from the Agricutural Society of Malmohus County. Free courses in handicraft are given in the rural parts of the district by teachers of the association who travel from place to place. These free courses comprise dyeing of yarns with herbs in the traditional manner, weaving, hemstitching, lace making, and fringe making. The teachers of schools of handicraft in the rural districts of this county have been given training courses in the old

handicraft patterns and methods with the view of introducing such handicraft in the schools, and for the same purpose, sample collections of woven articles, embroidery, etc., have been loaned free to several schools in the district. Courses in embroidery have also been given in Malmo, and have been well attended. In 1929 a total of 19 courses were given with 332 pupils.

A great deal of work has been done in collecting patterns which are characteristic of this part of Sweden. Books containing patterns of all the old weaving methods of the district, as well as hemstitching, lace making, embroidery, etc., have been published, and also several smaller publications on handicraft.

The association has also tried to stimulate interest in the old crafts through exhibitions and lectures throughout the district. These exhibitions have aroused great interest, and as a result many people have taken up these old crafts. The association has also taken part in several of the big exhibitions held in Sweden and abroad, the collection sent to the exhibition at Stockholm this year being very favorably commented upon.

Raw material.—All the raw materials used in the making of the textile handicraft goods are bought within the country, except the cotton for ginghams and gloria weave, a soft pliable material used for children's dresses, etc., which is imported. For the fancy weaving and embroidery in wool, home-dyed yarns are used. These yarns are dyed with colors obtained from leaves, moss, heather, etc., after the old fashion. The colors thus obtained are not quite even in tone, which gives the finished work a brighter appearance, and in addition the colors are lasting.

Varieties of handicrafts.—Of the handicraft articles, the textile goods are the most important. Goods for furniture upholstery are made of wool and linen, though gingham is also used to some extent for this purpose. Although handicraft articles are much more expensive than similar machine-made goods, there is a great demand for them, as they are much stronger than the machine-made articles. The ginghams and gloria weave have the additional feature of very fast colors, which makes them especially suitable for children's dresses and curtains. The gloria weave is also used for making lamp shades, ladies' neckwear, luncheon sets, doilies, etc., being often worked with hemstitching or cross-stitching, or both, and edged with lace.

Both plain rugs woven from cattle hair, which are said to be very durable, and fancy ones made of wool, which are woven or embroidered, are made. An old-fashioned type of rug, woven mostly in lengths about a yard wide for use in halls and stairways, and made from dress remnants, etc., cut in strips about half an inch wide, is becoming very popular. The many colors of the strips give the rug a bright and cheerful appearance.

Of the fancy work produced, rugs, pillows, and tapestries are the most common articles. They are chiefly woven, but embroidered articles are also found. The woven articles are principally made of wool. Tapestries are sometimes made of linen, but the pattern is always worked in wool. The patterns employed have been in use in this country for several years, and only slight variations from the original patterns are approved.

Among the different kinds of woolen embroidery, notice may be made of cross-stitch, twist-stitch (a variation of cross-stitch), and nuance embroidery (*schattersom*), all employed in making pillows and tapestries. Cross-stitch and twist-stitch wear well and for this reason are also employed in making rugs.

Linen tablecloths, towels, and sheets are woven to some extent. Pillowcases, sheets, table runners, etc., are hemstitched and also worked in the so-called "Swedish weaving," "bottom embroidery," and "cut-out embroidery."

Very beautiful and strong lace is made in Malmohus County, but the center of the Swedish lace making is the town of Vadstena in the county of Ostergotland, where the tradition of lace making goes back to the middle ages. Lace from this county is made without patterns, and pins are used only to hold the edges of the lace.

Knitting, done chiefly in the county of Halland, is used principally in the making of sweaters, gloves, caps, etc., for children and for sports wear. These articles, which are in bright colors and fanciful patterns, are very popular.

Other varieties of handicraft are furniture making, pottery, and copper and brass work, such as plates, candlesticks, etc.

Financing of the handicraft associations.—The business side of the Malmohus County Handicraft Association's activities is self-supporting and yields a surplus, part of which is used for the educational activities. Subsidies are also received for the support of these latter activities. In 1929 the following amounts were received: From the Government, 1,100 crowns ($294.80); from the county government board of Malmohus County, 3,000 crowns ($804); from the Malmohus County Agricultural Society, 1,000 crowns ($268); the total being 5,100 crowns ($1,366.80).

From the foregoing it will be seen that from an unpretentious start handicraft production has grown to be an industry of some importance, and it is believed that the limit of its activities is far from being reached as yet. Handicraft work is growing more and more popular, and handicraft articles are now to be found in almost every Swedish home. As yet no attempt has been made to solicit foreign sales, as the home market absorbs the entire output of the industry.

WOMEN AND CHILDREN IN INDUSTRY

Legislative Provisions on Dangerous Trades for Minors

ALL OF the 48 States provide some kind of legislation prohibiting the employment of minors in dangerous occupations or industries. Many of the States enumerate the dangerous employments and occupations most commonly prohibited—such as the cleaning and oiling of moving machinery, work in connection with processes in which poisonous acids and gases are used, or on scaffolding, heavy work in building trades, tunnels, or excavations. Legislation in other States is of a general nature, and provides that any place of employment or any occupation which is dangerous or prejudicial to the health, morals, life, or limb of the child is prohibited—such as acrobatic or gymnastic exhibitions, theatrical work, pool rooms, or bowling alleys. Approximately 15 of the States prohibit the employment of female employees where duties require them to stand constantly.

In the following table the laws of the several States are shown with the prohibited employments enumerated and the citation of the particular acts. In general the rules and regulations promulgated by the various State departments of labor are not included in the compilation.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS

[M=Males; F=Females]

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Alabama	16	16	Operating or assisting in operating any of the following machines: Circular or band saws, wood shapers, wood jointers, planers, sandpaper or wood-polishing machinery, wood turning or boring machinery, machines used in picking wool, cotton, hair, or any other material, job or cylinder printing presses, boring or drilling presses, stamping machines used in sheet metal or tinware or in paper or leather manufacturing or in washer or nut factories, metal or paper cutting machines, corner-staying machines, steam boilers, dough brakes or cracker machinery of any description, wire or iron straightening or drawing machinery, rolling-mill machinery, power punches or shears, washing, grinding, or mixing machinery, laundering machinery; in or about a rolling mill, machine shop or manufacturing establishment, which is hazardous, or dangerous to health, limb, or life; in proximity to any hazardous or unguarded gearing; upon any railroad, whether steam, electric, or hydraulic; upon any vessel or boat engaged in navigation or commerce within the jurisdiction of this State.	Code of 1923, sec. 3499.
	16	16	In, about, or in connection with processes in which dangerous or poisonous acids are used or in the manufacture or packing of paints, colors, white or red lead; soldering; occupations causing dust in injurious quantities; manufacture or use of poisonous dyes; manufacture or preparation of compositions with dangerous or poisonous gases; manufacture or use of compositions of lye in which quantity is injurious to health; on scaffolding; heavy work in building trades; in tunnel or excavation; coke breaker, coke oven, or quarry; any mine or assorting, manufacturing, or packing tobacco; operating any automobile, motor car, or truck; work in bowling alleys, upon theater or concert-hall stages, or in connection with theatrical performance or other exhibition or show; in any place or occupation State board of health may declare dangerous to life or limb or injurious to health or morals.	Idem, sec. 3500.
	21	21	Pool or billard room	Idem, sec. 3498.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Alaska			No provision	
Arizona	16	16	Sewing or adjusting machine belts in workshops or factories or assisting therein; oiling, wiping or cleaning machinery, or assisting therein; operating or assisting in operating circular or band saws, wood shapers or joiners, planers, sandpaper or wood-polishing machinery, picker machines, machines used in picking wool, cotton, or any upholstering material, paper-lace machines, leather-burnishing machines, burnishing machines in tannery or leather factory, power job or cylinder printing presses, emery or polishing wheels for polishing metal, wood turning or boring machinery, stamping machines in sheet-metal and tinware manufacturing or in washer and nut factories, corrugating rolls as in roofing and washboard factories, steam boilers, steam machinery or other steam generating apparatus, dough brakes or cracker machinery, wire or iron straightening machinery, rolling-mill machinery, punches or shears, washing, grinding, or mixing mills, calender rolls in rubber manufacturing, or laundering machinery; preparation of composition in which dangerous or poisonous acids are used; manufacture of paints, colors, or white lead; dipping, drying, or packing matches; in, or about, or in connection with mine, coal breaker, quarry, smelter, ore-reduction works, laundry, tobacco warehouse, cigar or other tobacco factory; in hotel, theater, concert hall, drug store, or place of amusement; operating automobile, motor car, or truck; in bowling alley; any other employment declared by State board of health to be dangerous to life or limb or injurious to health or morals.	Rev. Code, 1928, sec. 1363.
	18	18	In, about, or in connection with blast furnaces, smelters, or ore-reduction works; in outside erection and repair of electric wires; running or management of elevators, lifts, or hoisting machines; in underground mine; oiling hazardous and dangerous machinery in motion; switch tending, gate tending, track repairing; as brakeman, fireman, engineer, motorman, or conductor upon any railroad; in or about establishments where nitroglycerin, dynamite, dualin, guncotton, gunpowder, or other high or dangerous explosives are manufactured, compounded, or stored; any other employment declared by State board of health to be dangerous to life or limb or injurious to health or morals.	Idem, sec. 1370.
Arkansas	16	16	In, about, or in connection with any processes in which dangerous or poisonous acids or gases or other chemicals are used; soldering; occupations causing dust in injurious quantities; on scaffolding; heavy work in building trades; in tunnel or excavation, mine, coal breaker, coke oven, or quarry, bowling alley or pool or billiard room; any other occupation dangerous to the life and limb or injurious to health and morals.	Digest of 1921, sec. 7089.
	16	16	In saloon, resort, or bar where intoxicating liquors are sold; employment on theater or concert-hall stage or in connection with theatrical performance or other exhibition or show.	Idem, sec. 7086.
	16	16	In adjusting any belt to any machinery; sewing or lacing machine belts in any workshop or factory; oiling, wiping, or cleaning machinery or assisting therein; operating or assisting in operating any of the following machines: Circular or band saws, wood shapers, wood jointers, planers, sandpaper or wood-polishing machinery, wood turning or boring machinery, picker machines or machines used in picking wool, carding machines, job or cylinder printing presses operated by power other than foot power, boring or drill presses, stamping machines used in metal or in paper or leather manufacturing, metal or paper cutting machines, corner-staying machines in paper-box factories, steam boilers, dough brakes or cracker machinery of any description, wire or iron straightening or drawing machinery, rolling-mill machinery, washing, grinding, or mixing machinery, laundering machinery; in proximity to any hazardous or unguarded belt, machinery, or gearing; or upon any railroad, whether steam, electric, or hydraulic.	Idem, sec. 7087.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit M.	Age limit F.	Prohibited occupations or industries	Citation
California	16	16	Any business, exhibition, or vocation injurious to health, or limb; in singing, playing musical instruments, rope or wire walking, dancing; begging or peddling; as gymnast, acrobat, contortionist, or rider; in immoral practices.	Sims' Deering's Code, Penal Code, 1906, sec. 272.
	16	16	Adjusting belt to machinery; sewing or lacing machine belts in any workshop or factory; oiling, wiping, or cleaning machinery, or assisting therein; operating or assisting in operating circular or band saws, wood shapers or jointers, planers, sandpaper or wood-polishing machinery, wood turning or boring machinery, picker machines or machines used in picking wool, cotton, hair, or other material, carding machines, paper-lace machines, leather burnishing machines, printing presses, boring or drill presses, stamping machines in sheet-metal and tinware or paper and leather manufacturing or in washer and nut factories, metal or paper cutting machines, corner-staying machines in paper-box factories, corrugating rolls as in corrugated paper, roofing, or washboard factories, steam boilers, dough brakes or cracker machinery, wire or iron straightening and drawing machinery, rolling-mill machinery, power punches or shears, washing, grinding, or mixing machinery, calender rolls in paper and rubber manufacturing, laundering machinery, or unguarded belts, machinery or gearing; upon steam, electric or hydraulic railroad, or vessels or boats in navigation or commerce within jurisdiction of State; in, about, or in connection with processes in which dangerous or poisonous acids are used or in mine, coal breaker, coke oven, or quarry; manufacture or packing of paints, colors, white or red lead; soldering; occupations causing dust in injurious quantities; manufacture or use of dangerous or poisonous dyes or compositions of lye in which quantity thereof is injurious to health; manufacture or preparation of compositions with dangerous or poisonous gases; on scaffolding; heavy work in building trades; in tunnel or excavation; assorting, manufacturing, or packing tobacco; operating automobile, motor car, or truck; in bowling alley or pool or billiard room; any other occupation dangerous to life or limb or injurious to health or morals, or which the bureau of labor statistics may deem dangerous or injurious.	Acts of 1919, ch. 259, sec. 4.
Colorado	16	16	Occupations or exhibitions dangerous to life and limb; as actor in concert hall or room where intoxicating liquors are sold or in variety theater, etc.	Comp. Laws, 1921, sec. 4209.
	16	16	Underground works or mine, in or about surface workings thereof; in any smelter or coke oven; adjusting belt to machinery; operating or assisting in operating circular or band saws, wood shapers or jointers, planers, sandpaper or wood-polishing machinery, emery or polishing wheels or polishing metal, wood turning or boring machinery, stamping machines in sheet-metal and tinware manufacturing or in washer and nut factories, rolling-mill machinery, punches or shears, washing, grinding, or mixing mills, calender rolls in rubber manufacturing or laundry machinery; operating corrugating rolls in roofing factories, passenger or freight elevators, steam boiler, steam machinery or other steam-generating apparatus, or automobiles, wire or iron straightening machinery; preparing composition in which dangerous or poisonous acids are used; manufacture of paints, colors, or white lead; manufacture of goods for immoral purposes.[1]	Idem, sec. 4210.
Connecticut	16	16	Operating or assisting in operating any of the following machines: Circular or band saws; wood shapers; wood jointers; planers; sandpaper or wood-polishing machinery; picker machines or machines used in picking wool, cotton, fur, hair or any upholstery material; paper-lace machines; burnishing machines in any tannery or leather manufactory; job or cylinder printing presses having motor power other than foot; wood turning or boring machinery; stamping machines used in sheet-metal and tinware manufacturing or in washer or nut factories; machines used in making corrugating rolls; dough brakes or cracker machinery of any description; wire or iron straightening machinery; rolling-mill machinery; power punches or shears; washing, grinding, or mixing machinery; calender rolls in rubber manufacturing; or laundering machinery.	Gen. Stats., 1918, sec. 5328.

[1] Also occupations which require female employees to stand constantly.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit M.	Age limit F.	Prohibited occupations or industries	Citation
Connecticut—Continued	16	16	Adjusting or assisting in adjusting belt on machine; oiling or assisting in oiling, wiping, or cleaning machinery, while power is attached; preparing compositions in which dangerous acids are used; soldering; manufacture or packing of paints, dry colors, red or white lead; manufacture, packing, or storing of gun or blasting powder, dynamite, nitroglycerin compounds, safety fuses in raw or unvarnished state, electric fuses for blasting purposes or other explosives; in or about distillery, brewery, or other place where alcoholic liquors are manufactured, packed, wrapped, or bottled; in manufacture or use of any dangerous or poisonous gas or dye or composition of lye in which quantity thereof is injurious to health; on scaffolding; heavy work in building trades; in tunnel, mine, or quarry; operating or assisting to operate emery stone or buffing wheel.	Gen. Stats., 1918, sec. 5329.
	18	18	Rapidly moving elevators	Idem, sec. 2610.
	16	16	Wire walking; as rider, contortionist, gymnast, etc.; any exhibition or business dangerous to life, health, or morals.	Idem, sec. 6208.
Delaware	15	15	Occupations or exhibitions dangerous to health and morals; as acrobat, gymnast, rope or wire walker.	Rev. Code, 1915, 2223, sec. 32.
	16	16	Stage, theater, or theatrical performance, except under certain conditions. (See law.)	Idem, 3147, sec. 47 (as amended by Acts of 1917, ch. 232).
	16	16	Operating or assisting in operating steam boilers or blast furnaces, circular saws, wood shapers or jointers, paper-lace machines, power job or cylinder printing presses, stamping machines in sheet-metal and tinware or paper and leather manufacturing or in washer and nut factories, metal or paper cutting machines, corrugating rolls, as in corrugated paper or roofing or washboard factories, dough brakes or cracker machinery, wire or iron straightening or drawing machinery, rolling-mill machinery, power punches or shears, washing, grinding, or mixing machinery, calender rolls in paper and rubber manufacturing, or other heavy rolls driven by power, passenger elevators or lifts; upon or in connection with dangerous electrical machinery or appliances; adjusting or assisting in adjusting belt to machinery, or in proximity to hazardous or unguarded belts, machinery, or gearing; oiling, wiping, or cleaning machinery while in motion; on scaffolding; heavy work in building trades; about docks or wharves; stripping or assorting tobacco; in, about, or in connection with processes in which dangerous or poisonous acids are used; in mine, quarry, coal breaker, or coke oven; manufacture or packing of paints, colors, white or red lead; manufacture or preparation of compositions with dangerous or poisonous gases; manufacture or use of dangerous or poisonous dyes; on any steam, electric, or other railroad or passenger or freight vessel or boat; operating motor vehicles; in tunnel or excavation; in or about distillery, brewery, or establishment where alcoholic liquors are manufactured or bottled; any other occupation dangerous to life or limb or injurious to health or morals, as decided by labor commissioner.	Idem, 3145, sec. 45 (as amended by Acts of 1923, ch. 202).
	18	18	In outside erection or repair of electric wires; running or management of hoisting machines or dynamos; operation or use of polishing or buffing wheel; switch tending, gate tending, or track repairing; as brakeman, fireman, engineer, motorman, or conductor upon railroad or railway, railroad telegraph operator, or pilot, fireman, or engineer of passenger boat or vessel; in or about any establishment wherein gunpowder, nitroglycerin, dynamite, or other high or dangerous explosives are manufactured or compounded.	Idem, 3148, sec. 48.
	21	21	In rooms where intoxicating liquors (except for medicinal purposes) are sold.	Idem, 3149, sec. 49.
District of Columbia.	16	16	Operation of power machinery; oiling, wiping, or cleaning machinery or assisting therein.	Code of 1929, Title 7, Pt. II, sec. 114.
	16	16	Rope walker, contortionist, gymnast, etc.	Idem, sec. 117.
	(1)	(1)	Any place of employment or any employment dangerous or prejudicial to life, health, safety, or welfare.	Idem, sec. 113.

Also occupations which require female employees to stand constantly. [1] Minors.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit M.	Age limit F.	Prohibited occupations or industries	Citation
District of Columbia—Con.	18	18	Operating freight or passenger elevator; in quarry, tunnel, or excavation, tobacco warehouse or cigar or other tobacco factory.	Case of 1929, Title 7, Pt. II, sec. 115.
		18	Retail or tobacco store; hotel or apartment house; usher, attendant or ticket seller in theater or place of amusement; or as messenger.	Do.
Florida	21	21	Pool room, billiard room, brewery, saloon, or barroom where intoxicating liquors are manufactured or sold.	Rev. Gen. Stats., 1927, sec. 5950.
	16	16	Sewing or assisting in sewing belts; adjusting belt to machinery; oiling or assisting in oiling, wiping, or cleaning machinery; operating or assisting in operating circular or band saws, wood shapers or joiners, planers, sandpaper or wood-polishing machinery, emery or polishing wheels for polishing sheet metal, wood turning or boring machinery, stamping machines in sheet-metal and tinware manufacturing or in washer and nut factories, dough brakes or cracker machinery, wire or iron straightening machinery, rolling-mill machinery, punches or shears, washing, grinding, or mixing mills, calender rolls in rubber manufacturing, laundry machinery, passenger or freight elevators, corrugated rolls as in roofing factories, or steam boiler, steam machinery, or other steam-generating apparatus; as pin boys in bowling alley; preparing composition in which dangerous or poisonous acids are used: manufacture of paints, colors, or white lead, or of goods for immoral purposes; any occupation dangerous or injurious to health or morals or to life and limb.[1]	Idem, sec. 5953.
	18	18	Moving machinery	Idem, sec. 5954.
Georgia	16	16	Operating or assisting in operating any of the following machines: Circular or band saws; wood shapers; wood jointers; planers; sandpaper or wood-polishing machinery; wood turning or boring machinery; machines used in picking wool, cotton, hair, or any other material; job or cylinder printing presses; boring or drilling presses; stamping machines used in sheet metal or tin ware, or in paper or leather manufacturing, or in washer or nut factories; metal or paper cutting machines; corner-staying machines; steam boilers; dough brakes or cracker machinery of any description; wire or iron straightening or drawing machinery; rolling-mill machinery; power punches or shears; washing, grinding, or mixing machinery; laundering machinery; in or about a rolling mill, machine shop, or manufacturing establishment, which is hazardous, or dangerous to health, limb, or life; in proximity to any hazardous or unguarded gearing; upon any railroad, whether steam, electric, or hydraulic; upon any vessel or boat engaged in navigation or commerce within the jurisdiction of this State; in, about, or in connection with any process in which dangerous or poisonous acids are used; manufacture or packing of paints, colors, white or red lead; soldering; occupations causing dust in injurious quantities; manufacture or use of poisonous dyes; manufacture or preparation of compositions with dangerous or poisonous gases; manufacture or use of compositions of lye in which the quantity is injurious to health; on scaffolding; heavy work in the building trades; in tunnel or excavation; in, about, or in connection with any mine, coke breaker, coke oven, or quarry; to operate any automobile, motor car or truck; in bowling alley; in any place or occupation which the State board of health may declare dangerous to life or limb or injurious to the health or morals. (This act shall not apply to job or cylinder presses operated in connection with charitable or eleemosynary institutions.)	Acts of 1925, No. 247, sec. 3 (p. 291).
	12	12	Dangerous or improper vocations. (Rope walking, begging, gymnast, circus rider, etc.).	Code of 1910 (Penal Code), sec. 756.
Hawaii			No provision	
Idaho	16	16	Any occupation dangerous to health, life, limb, or morals; or singing, playing upon musical instruments, rope or wire walking, acrobatic work, etc.	Comp. Stats., 1919, sec. 1029.
	14	14	Underground mines	Idem, sec. 1024.

[1] Also occupations which require female employeess to stand constantly.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Illinois	14	14	Any occupation injurious to health or dangerous to life or limb; or singing, dancing; peddling; as gymnast, etc.	Rev. Stats., 1917, ch. 38, sec. 42a.
	16	16	Sewing belts; adjusting belt to machinery; oiling or assisting in oiling, wiping, or cleaning machinery; operating or assisting in operating circular or band saws, wood shapers or joiners, planers, sandpaper or wood-polishing machinery, emery or polishing wheels for polishing metal, wood turning or boring machinery, stamping machines in sheet-metal and tinware manufacturing or in washer and nut factories, corrugating rolls as in roofing factories, passenger or freight elevators, steam-boilers, steam machinery or other steam-generating apparatus, dough brakes or cracker machinery, wire or iron straightening machinery, rolling-mill machinery, punches or shears, washing, grinding, or mixing mill, calender rolls in rubber manufacturing, or laundry machinery; in mine or quarry; preparing composition in which dangerous or poisonous acids are used; manufacture of paints, colors or white lead; any employment department of labor finds to be dangerous to life or limb or injurious to health or morals; in bowling alley, theater, concert hall, or place of amusement wherein intoxicating liquors are sold.[1]	Idem, ch. 48, sec. 20i (as amended by Acts of 1921, p. 435, sec. 10, and Acts of 1929, sec. 10, p. 429).
Indiana	15	15	Occupations dangerous to health and morals	Burns' Ann. Stats., 1914, sec. 2623.
	16	16	Oiling, wiping, or cleaning machinery or assisting therein; operating or assisting in the operation of circular or band saws, wood shapers or joiners, planers, stamping machines in sheet-metal or tinware manufacturing or in washer or nut factories, any other metal-stamping machine, boiler or other steam-generating apparatus, dough brakes or cracker machinery, wire or iron-straightening machinery, rolling-mill machinery, punches or shears, drill presses, grinding or mixing mills, calender rolls in rubber manufacturing, laundry machinery, corrugating rolls as in roofing and washboard manufacturing, metal or paper-cutting machines, corner-staying machines in paper-box factories; assorting, manufacturing, or packing tobacco; in or about mine, quarry, or excavation; in hotel, theater or bowling alley; any other occupation dangerous to life or limb or injurious to health or morals.	Acts of 1921, ch. 132, sec. 22.
	18	18	Oiling and cleaning moving machinery; operation of emery wheels, except for sharpening of tools used by apprentice; at abrasive, polishing, or buffing wheels; operation of elevator, lift or hoisting machines; in or about establishments where nitroglycerin, dynamite, dualin, guncotton, gunpowder or other high explosives are manufactured, compounded or stored; dipping, dyeing or packing matches; in saloon, distillery, brewery, or other establishment where alcoholic liquors are manufactured, packed, wrapped, or bottled; any other occupation dangerous to life or limb or injurious to health or morals.[1]	Idem, sec. 23.
	21	21	Public pool or billiard rooms	Idem, sec. 24.
Iowa	16	16	Any work or occupation which, by reason of its nature or the place of employment, would injure health or morals; work requiring handling or use of gunpowder, dynamite, or other like explosive; in or about mine during the school term, or hotel, café, restaurant, bowling alley, pool or billiard room, cigar store, barber shop; any occupation dangerous to life or limb.[1]	Code of 1927, ch. 76, sec. 1536.
	16	16	Operating or assisting in operating freight or passenger elevator or dangerous machinery (does not apply to pupils working under an instructor in manual training departments).	Idem, sec. 1529.
	16	18	Cleaning moving machinery	Do.
Kansas	16	16	Mine, quarry, or any occupation at any place dangerous or injurious to life, limb, health, or morals.	Rev. Stats. 1923, ch. 38, art. 6, sec. 38-602.
	18	18	Show of hypnotism, mesmerism, etc	Idem, sec. 38-703.
	14	14	Acrobat, gymnast, contortionist, etc	Idem, sec. 38-704.

[1] Also occupations which require female employees to stand constantly.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Kentucky	16	16	Any occupation or exhibition dangerous to health or life, limb, or morals.	Stats., 1930, ch. 18, sec. 326.
	16	16	Sewing or assisting in sewing belts; adjusting belt to machinery; oiling, wiping, or cleaning machinery; operating or assisting in operating circular or band saws, wood shapers or joiners, planers, sandpaper or wood-polishing machinery, emery or polishing wheels for polishing sheet metal, wood turning or boring machinery, picker machines or machines used in picking wool, cotton, hair or other materials, carding machines, paper-lace machines, leather-burnishing machines, power job or cylinder printing presses, boring or drill presses, stamping machines in sheet metal and tinware or paper and leather manufacturing or in washer and nut factories, metal or paper cutting machines, corner-staying machines in paper-box factories, corrugating rolls as in corrugated paper, roofing, or washboard factories, steam boilers, steam machinery, or other steam-generating apparatus, dough brakes or cracker machinery, rolling-mill machinery, power punches or shears, washing, grinding, or mixing machinery, calender rolls in paper and rubber manufacturing, laundering machinery, or passenger or freight elevators; work in proximity to hazardous or unguarded belts, machinery, or gearing; work upon steam, electric, or hydraulic railroad; processes in which dangerous or poisonous acids are used; manufacture or packing of paints, colors, white or red lead; soldering; occupations causing dust in injurious quantities; manufacture or use of dangerous or poisonous dyes, or of compositions of lye in which quantity thereof is injurious to health; manufacture or preparation of compositions with dangerous or poisonous gases; in tunnel or excavation; on scaffolding; in, about, or in connection with mine, coke oven, or quarry; assorting, manufacturing, or packing tobacco; operating automobile, motor car, or truck; in bowling alley, pool or billiard room, distillery, brewery, or other establishments where alcoholic liquors are manufactured, packed, wrapped, or bottled; in hotel, theater, concert hall, club, place of amusement, or other establishment where intoxicating liquors are sold; any other occupation dangerous to life or limb or injurious to health or morals.	Idem, sec. 331a (9).
	18	18	Cleaning moving machinery	Idem, sec. 331a (10).
	14	14	Public amusements, etc	Idem, sec. 331a (1).
Louisiana	14	14	Any occupation deemed unhealthful or dangerous; mill, factory, mine, packing-house, manufacturing establishment, workshop, laundry, millinery or dressmaking store, or mercantile establishment in which more than 5 persons are employed; theater, concert hall, or in or about place of amusement where intoxicating liquors are made or sold; in bowling alley, bootblacking establishment, freight or passenger elevator, transmission or distribution of telegraph, telephone, or other messages or of merchandise.	Acts of 1908, Act No. 301, sec. 1 (as amended by Acts of 1914, No. 133).
	(2)	(2)	Cleaning moving machinery	Idem, sec. 17.
	17	17	Pool or billiard rooms	Acts of 1912, Act No. 25.
	16	16	Any occupation, exhibition or place dangerous to health, life, limb, or morals.	Idem, Act No. 184.
Maine	16	16	Any occupation or exhibition dangerous to health, morals, life, or limb.	Rev. Stat. 1916, ch. 120, sec. 32.
	14	14	Manufacturing or mechanical establishment, or in bowling alley or pool room.	Laws of 1927, ch. 171
	16	16	Ushers; operating elevators with speed of over 200 feet a minute.	Do.
	15	15	Operating elevators	Do.

[2] Minors.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Maryland	14	14	Occupation or exhibition of a dangerous character or as acrobat, gymnast, contortionist, circus rider, etc.	Ann. Code, 1924, art. 27, sec. 379.
	16	16	In connection with processes in which dangerous or poisonous acids are used; manufacture or packing of paints, colors, white or red lead; soldering; occupations causing dust in injurious quantities; manufacture or use of dangerous or poisonous dyes, or of compositions of lye in which quantity thereof is injurious to health; manufacture or preparation of compositions with dangerous or poisonous gases; on scaffolding; heavy work in building trades; in tunnel or excavation; in, about, or in connection with mine, coal breaker, coke oven, or quarry; in factory or establishment where tobacco or tobacco products are prepared, manufactured, assorted, or packed; operating automobile, motor car, or truck; in pool or billiard room, theater, or motion-picture establishment; any other occupation dangerous to life and limb, or injurious to health or morals; theater or concert hall stage in connection with professional theatrical performance, exhibition, or show.	Idem, art. 100, sec. 8.
			Adjusting any belt to any machinery; sewing or lacing machine belts in any workshop or factory; oiling, wiping or cleaning machinery or assisting therein; operating or assisting in operating any of the following machines: Circular or band saw, crosscut saws, slashers, or other cutting machines, wood shapers, wood jointers, planers, sandpaper or wood-polishing machinery, wood turning or boring machinery, picker machines or machines used in picking wool, cotton, hair or any other material, carding machines, paper-lace machines, leather-burnishing machines, job or cylinder printing presses operated by power other than foot power, boring or drill presses, stamping machines used in sheet-metal and tinware or in paper and leather manufacturing or in washer or nut factories, metal or paper cutting machines, corner-staying machines in paper-box factories, corrugating rolls such as are used in corrugated paper, roofing or washboard factories, steam boilers, dough brakes or cracker machinery of any description, wire or iron straightening or drawing machinery, rolling-mill machinery, power punches or shears, washing, grinding, or mixing machinery, calender rolls in paper or rubber manufacturing, laundering machinery; in proximity to any hazardous or unguarded belts, machinery or gearing; on any machine or machinery operated by power other than foot or hand power; or upon any railroad, whether steam or electric or hydraulic; or upon any vessel or boat engaged in navigation or commerce.	Idem, sec. 7.
	18	18	In, about, or in connection with blast furnaces, docks, or wharves; outside erection and repair of electric wires; running or management of elevators, lifts, or hoisting machines or dynamos; oiling or cleaning machinery in motion; operation of emery wheels or any abrasive polishing or buffing wheel where articles of the baser metals or iridium are manufactured; switch tending, gate tending, track repairing; as brakemen, firemen, engineers, motormen, or conductors on railroads; railroad telegraph operators; pilots, firemen, or engineers on boats and vessels; in or about establishments where nitroglycerin, dynamite, dualin, guncotton, gunpowder, or other high or dangerous explosives are manufactured, compounded, or stored; manufacture of white or yellow phosphorus or phosphorus matches; in distillery, brewery, or other establishment where alcoholic liquors are manufactured packed, wrapped, or bottled; in theater, concert hall, club, or other place of amusement wherein intoxicating liquors are sold.[1]	Idem, sec. 22.
	21	21	Saloon or barroom where intoxicating liquors are sold	Idem, sec. 23.

[1] Also occupations which require female employees to stand constantly.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Massachusetts	16	16	Operating or assisting in operating circular or band saws, wood shapers or jointers, planers, picker machines or machines used in picking wool, cotton, hair, or other material, paper-lace machines, leather burnishing machines, power job or cylinder printing presses, stamping machines in sheet-metal and tinware or paper or leather manufacturing or in washer and nut factories, metal or paper cutting machines, corner-staying machines in paper-box factories, corrugating rolls as in corrugated paper, roofing, or washboard factories, steam boilers, dough brakes or cracker machinery, wire or iron straightening or drawing machinery, rolling-mill machinery, power punches or shears, washing, grinding, or mixing machinery, calender rolls in paper and rubber manufacturing or other heavy rolls driven by power, laundering machinery; upon or in connection with any dangerous electrical machinery or appliances; adjusting or assisting in adjusting hazardous belt to machinery or in proximity to hazardous or unguarded belt, machinery, or gearing while such machinery or gearing is in motion; on scaffolding; heavy work in building trades; stripping, assorting, manufacturing, or packing tobacco; in tunnel; public bowling alley, pool or billiard room; operating, cleaning, or repairing a freight elevator.	Gen. Laws, 1921, ch. 149, sec. 61.
	18	18	In or about blast furnaces; operation or management of hoisting machines; oiling or cleaning hazardous machinery in motion; operation or use of polishing or buffing wheel; switch tending, gate tending, track repairing; as brakeman, fireman, engineer, motorman, or conductor upon railroad or railway; as fireman or engineer upon vessel or boat; operating motor vehicles; in or about establishments wherein gunpowder, nitroglycerin, dynamite, or other high or dangerous explosive is manufactured or compounded; manufacture of white or yellow phosphorus or phosphorus matches; in distillery, brewery, or any other establishment where alcoholic liquors are manufactured, packed, wrapped, or bottled; in part of hotel, theater, concert hall, place of amusement, or other establishment where intoxicating liquors are sold. (Minors may be employed in drug stores.)	Idem. sec 62.
	15	15	Theatrical work, acrobatics, etc	Idem, sec. 104.
Michigan	16	16	Occupation or exhibition dangerous to health, life, or limb; or as gymnast, contortionist, acrobat, mendicant, etc.	Comp. Laws, 1915, sec. 7222.
	16	16	Theater (certain exceptions), variety show, motion-picture show, burlesque show, or other kind of playhouse, music or dance hall, pool or billiard room.	Idem, sec. 5332 (as amended by Acts of 1923, No. 206, and Acts of 1929, No. 102).
	18	18	Cleaning machinery while in motion; any hazardous employment or where health may be injured or morals depraved.[1]	Do.
Minnesota	16	16	Sewing or adjusting belts used on machinery; oiling or assisting in oiling, wiping, or cleaning machinery; operating or assisting in operating circular or band saws, wood shapers or jointers, planers, sandpaper or wood-polishing machinery, emery or polishing wheels for polishing metal, wood turning or boring machinery, stamping machines in sheet-metal and tinware manufacture or in washer and nut factories, dough brakes or cracker machinery, rolling-mill machinery, punches or shears, washing, grinding or mixing mill, laundry machinery, or passenger or freight elevators; operating corrugating rolls in roofing factories, steam boilers, steam machinery or other steam-generating apparatus; tending moving machinery; wire or iron straightening machinery, or calender rolls in rubber manufacture; setting pins in bowling alleys; preparing or assisting in preparing of composition in which dangerous or poisonous acids are used; manufacturing of paints, colors or white lead or of goods for immoral purposes; any other employment or occupation dangerous to life, limb, health, or morals.[1]	Gen. Stats., 1923, secs. 4103 (as amended by Acts of 1927, ch. 388, and Acts of 1929, ch. 234), 4149, 4150.
	18	18	As wire or rope walker, contortionist; in aerial acts; or any practice or exhibition dangerous or injurious to life, limb, health, or morals.	Do.

[1] Also occupations which require female employees to stand constantly.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Mississippi			No list of dangerous occupations as such	
Missouri	16	16	Operation of power machinery or assisting therein, except machinery for agricultural purposes or in domestic service; in mine or underground work; preparing composition in which dangerous or poisonous acids or alkalies are used; manufacture of paints, colors, or white leads; dipping, drying, or packing matches; manufacturing, packing, or storing powder, dynamite, nitroglycerin compounds, fuses, or other explosives; sewing, lasting, or adjustment of belt to power machinery; oiling, wiping, or cleaning machinery; operating or assisting in operating machine used in picking wool, cotton, hair, or upholstering material, power job or cylinder press, metal polishing or grinding machine, or machine used for manufacture of goods for immoral purposes; in, about, or in connection with brewery or other establishment where alcoholic liquors are manufactured or sold, packed, wrapped, or bottled; in hotel, pool or billiard hall, wholesale drug store, saloon, bowling alleys.	Rev. Stats., 1919, sec. 3527.
		18	Messenger service	Idem, sec. 3528.
	14	14	Any manufacturing or mechanical establishment in which mechanical power is used, or where the work would, in opinion of two reputable physicians in locality, be dangerous to health.	Idem, sec. 3531.
	16	16	On any scaffolding; erecting or repairing of electric wires or lines; operating railway or railroad engine or car, or street or interurban car; in connection with construction or repair work on or for any railroad or railway, street or interurban line or tracks; upon or in operation of passenger or freight elevator; operation of automobile, truck, or motor vehicle; in concert hall, theater or cabaret, restaurant (certain students excepted); any other occupation dangerous to life, health, or limb, or injurious to health or morals.	Acts of 1921, p. 184 (as amended by Acts of 1929, p. 130).
Montana	16	16	In or about mine, smelter, workshop, factory; steam, electric, hydraulic or compressed-air railroad, passenger or freight elevator, where machinery is operated; telegraph, telephone, or messenger company; or any occupation known to be dangerous or unhealthful, or which may be detrimental to morals.	Rev. Codes, 1921, sec. 3095.
	16	16	Mendicant, acrobatic, etc., occupations	Idem, sec. 11021.
Nebraska	16	16	Work or place dangerous to life or limb or injurious to health or morals.	Comp. Stats., 1922, sec. 7681.
	14	14	Theater, concert hall, bowling alley, etc., operating elevators.	Idem, sec. 7669.
Nevada	18	18	Occupations dangerous to life or limb or injurious to health or morals; begging, etc.	Rev. Laws, 1912, sec. 6823.
	16	16	In, about, or in connection with the preparing of any composition in which dangerous or poisonous acids are used, manufacture of paints, colors or white lead; dipping, drying or packing matches, manufacture of goods for immoral purposes; in, about, or in connection with any mine, coal breaker, quarry, smelter, ore-reduction works, laundry, tobacco warehouses, cigar factory, or other factory where tobacco is manufactured or prepared, distillery, brewery, or any other establishment where malt or alcoholic liquors are manufactured, packed, wrapped or bottled; in, about, or in connection with glass furnaces, smelters, or ore-reduction works; in outside erection and repair of electric wires; running or management of elevators, lifts, or hoisting machines; oiling hazardous or dangerous machinery in motion; switch tending, gate tending, track repairing; as brakeman, fireman, engineer, motorman, conductor upon any railroads; in or about establishments where nitroglycerin, dynamite, dualin, guncotton, gunpowder or other high or dangerous explosives are manufactured, compounded or stored; in any other employment declared by the State board of health to be dangerous to the lives or limbs, or injurious to the health or morals.	Idem, 1919, Vol. III, pp. 2649, 2650.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
New Hampshire	14	14	Dancing, singing, wire or rope walking; as a gymnast, circus rider, etc.	Pub. Laws, 1926, ch. 379, sec. 6.
	14	14	Quarries, etc	Idem, ch. 118, sec. 18.
New Jersey	15	15	Rope or wire walking, acrobat, gymnast, contortionist, etc., occupations dangerous to health, morals, life, or limb.	Comp. Stats., 1910, p. 2816, sec. 47.
	14	14	Mines, quarries, etc	Idem, p. 3023, sec. 16 (as amended by Acts of 1923, ch. 80).
	18	18	Mendicant occupations, etc., dangerous to health, morals, life, or limb.	Idem, p. 2816, sec. 48.
	16	16	Adjusting belt to machinery; sewing or lacing machine belts in workshop or factory; oiling, wiping, or cleaning machinery, or assisting therein; operating or assisting in operating circular or band saws, wood choppers or jointers, planers, sandpaper or wood-polishing machinery, wood turning or boring machinery, picker machines, or machines used in picking wool, cotton, hair, fur, or any other material, carding machines, paper-lace machines, power job or cylinder printing presses, boring or drill presses, stamping machines in sheet-metal and tinware or paper and leather manufacture or in washer and nut factories, metal or paper cutting machines, corner-staying machines in paper-box factories, corrugating rolls as in corrugated paper, roofing, or washboard factories, steam boilers, dough brakes or cracker machinery, wire or iron straightening or drawing machinery, rolling-mill machinery, power punches or shears, washing, grinding, or mixing machinery, calender rolls and mixing rolls in paper and rubber manufacturing, or laundering machinery; in proximity to hazardous or unguarded belting, machinery, or gearing which in judgment of commissioner of labor is menace to safety; in, about, or in connection with processes in which dangerous or poisonous acids are used; manufacture or packing of paints, colors, white or red lead; any process in which lead or its compounds are employed; soldering; occupations causing mineral, animal, or vegetable dust in injurious quantities, including flint, clay, metal, and talc dust, tobacco, rubber, and cotton dust, silk, fur, wool, and leather dust; manufacture or use of dangerous or poisonous dyes, of compositions of dye in which quantity thereof is injurious to health; manufacture or preparation of compositions with dangerous or poisonous gases or fumes; any trade process which offers exposure to excessive heat, cold, muscular exertion, or other physical risk which in judgment of commissioner of labor is harmful to health and future working efficiency.	Idem, p. 3023, sec. 22 (as amended by Acts of 1923, ch. 80).
	16	16	Dangerous employments	Acts of 1911, ch. 136, sec. 5 (as amended by Acts of 1918, ch. 204).
New Mexico	16	16	Operating belted sewing machines in any workshop or factory, or assisting therein; adjusting any belt to any machinery; oiling, wiping, or cleaning machinery while in motion, or assisting therein; operating or assisting in operating circular saws, wood jointers or shapers, planers, sandpaper or wood-polishing machinery, picker machines, machines used in picking wool, cotton, or hair, paper-lace machines, burnishing machines in tannery or leather manufacturing, power job or cylinder printing presses, emery or polishing wheels for polishing metal, wood turning or boring machinery, steam boilers, steam machinery or other steam-generating apparatus, dough brakes or cracker machinery, power punches or shears, washing, grinding, or mixing mills, laundering machinery, or passenger or freight elevators; preparing any composition in which dangerous or poisonous acids or alkalies are used; manufacture of paints, colors, or	Ann. Stats., 1929, sec. 80–110.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
New Mexico—Continued	------	------	white lead; dipping, drying, or packing matches; manufacturing, packing, or storing powder, dynamite, nitroglycerin compounds, fuses, or other explosives; manufacture of goods for immoral purposes; in or about any establishment where malt or alcoholic liquors are manufactured, packed, wrapped, or bottled; in hotel, concert hall, motion-picture show, pool or billiard hall, wholesale drug store, or place of amusement; operating any automobile, motor car, or truck; in any bowling alley; any employment dangerous to lives and limbs or injurious to the health or morals.	
	18	18	Mine or quarry	Ann. Stats., 1929, sec. 80-111.
New York	16	16	Operating or assisting in operating circular or band saws, calender rolls, corrugating roll-making machines, cracker machinery, dough brakes, drill presses, laundering machinery, leather burnishing machinery, metal cutting or stamping machines, paper-box corner-staying machines, paper-cutting machines, paper-lace machines, picker machines or machines used in picking wool, cotton, hair, or upholstery material, planers, power punches or shears, job or cylinder power-printing presses, rolling-mill machinery, sandpaper machinery, steam boilers, washing, grinding, or mixing machinery, wire or iron straightening machinery, wood jointers, polishers, or shapers, or wood turning or boring machinery; adjusting belts to machinery; cleaning, oiling, or wiping machinery; manufacturing or packing paints, dry colors, or red or white leads; manufacturing, packing, or storing explosives; match dipping or dyeing; preparing composition in which dangerous or poisonous acids are used; about distillery, brewery, or other establishment where alcoholic liquors are manufactured, packed, wrapped, or bottled.[1]	Consol. Laws, 1909, ch. 31 (as amended by Acts of 1921, ch. 50), Art. IV, sec. 146 (1-2).
	16	18	Elevator	Idem (4, 5).
	18	------	Elevator running at speed greater than 200 feet per minute	Idem (4).
	16	(2)	Mine or quarry	Idem (6).
	18	21	Cleaning of moving machinery	Idem (7).
	------	21	Conductor or guard on street railroads	Idem (9).
	------	21	Messenger for telegraph or messenger company	Idem (10).
	18	(2)	Operating or using emery, tripoli, rouge, corundum, stone, carborundum, or abrasive or emery polishing or buffing wheel where articles of the baser metals or iridium are manufactured.	Idem (8), (as amended by Acts of 1921, ch. 642, sec. 6).
	18	18	Any occupation dangerous or injurious to health in the opinion of the board.	Idem (11).
	16	16	As rope or wire walker, gymnast, wrestler, contortionist, rider, or acrobat; begging; peddling; singing, dancing; or in theatrical exhibition, etc.; and in practice or exhibition or place dangerous or injurious to life, limb, health, or morals.	Consol. Laws, 1909, ch. 40, sec. 485 (as amended by Acts of 1916, ch. 278, and Acts of 1928, ch. 697).
North Carolina	16	16	In, about, or in connection with quarry or mine	Consol. Stats., 1919, sec. 5033 (as amended by Acts of 1927, ch. 251).
North Dakota	16	16	Mining; sewing or assisting in sewing belts; adjusting belt to machinery; oiling or assisting in oiling, wiping, or cleaning machinery; operating or assisting in operating circular or band saws, wood shapers or joiners, planers, sandpaper or wood-polishing machinery, emery or polishing wheels for polishing metal, wood turning or boring machinery, stamping machines in sheet-metal and tinware manufacturing or in washer and nut factories, dough brakes or cracker machinery, wire or iron straightening machinery, rolling-mill machinery, punches or shears, washing, grinding, or mixing mills, or calender rolls in rubber manufacturing, laundry machinery, or passenger or freight elevator; operating corrugating rolls as in roofing factories, steam boiler, steam machinery or	Acts of 1923, ch. 155, sec. 10.

[1] Also occupations which require female employees to stand constantly.
[2] Any female.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit M.	Age limit F.	Prohibited occupations or industries	Citaion
North Dakota—Continued	------	------	other steam-generating apparatus; as pin boys in bowling alleys; preparing composition in which dangerous or poisonous acids are used; manufacture of paints, colors, or white lead, or of goods for immoral purposes; any other employment considered dangerous to life or limb or injurious to health or morals; in theater, concert hall, or place of amusement (except under certain conditions).[1]	
Ohio	16	16	In, about, or in connection with processes in which dangerous or poisonous acids are used; manufacture or packing of paints, colors, white or red leads; soldering; occupations causing dust in injurious quantities; manufacture or use of dangerous or poisonous dyes, or of compositions of lye in which the quantity thereof is injurious to health; manufacture or preparation of compositions with dangerous or poisonous gases; on scaffolding; heavy work in building trades; in tunnel or excavation; in, about, or in in connection with mine, coal breaker, coke oven, or quarry; assorting, manufacturing, or packing tobacco; operating automobile, motor car, or truck; in bowling alley, pool or billiard room; any other occupation dangerous to life and limb or injurious to health or morals.	Gen. Code, 1910, sec. 13002 (as amended by Acts of 1913, p. 864, sec. 13002).
			Adjusting any belt to any machinery; sewing or lacing machine belts in any workshop or factory; oiling, wiping or cleaning machinery or assisting therein, operating or assisting in operating any of the following machines: Circular or band saws, wood shapers, wood jointers, planers, sandpaper or wood-polishing machinery, wood turning or boring machinery, picker machines or machines used in picking wool, cotton, hair, or any other material, carding machines, paper-lace machines, leather-burnishing machines, job or cylinder printing presses operated by power other than foot power, boring or drill presses, stamping machines used in sheet-metal and tinware or in paper and leather manufacturing or in washer and nut factories, metal or paper cutting machines, corner-staying machines in paper-box factories, corrugating rolls in corrugated paper, roofing or washboard factories, steam boilers, dough brakes or cracker machinery of any description, wire or iron straightening or drawing machinery, rolling-mill machinery, power punches or shears, washing, grinding, or mixing machinery, calender rolls in paper and rubber manufacturing, laundering machines, burring machinery; in proximity to any hazardous or unguarded belts, machinery or gearing; upon any railroad, steam, electric, or hydraulic, or any vessel or boat engaged in navigation or commerce within the jurisdiction of this State.	Idem, sec. 13001 (as amended by Acts of 1913, p. 864, sec. 13001).
	16-18	16-18	State board of health may decide whether occupation not already prohibited by law is dangerous or injurious.	Idem, secs. 13003, 13007-4.
	16	18	Theater or other place of amusement (except when not otherwise prohibited by law).	Idem, sec. 13007-3.
	14	14	Singing; as gymnast, acrobat, etc.; begging; in business, exhibition, or vocation injurious to health or dangerous to life or limb.	Idem, sec. 12968.
	------	21	(*)	Idem, sec. 13005.
	21	21	Saloon, barroom, where intoxicating liquors are sold; or handling intoxicating liquors in any way.	Idem, sec. 13007-5
	------	21	Mine, quarry, coal breaker (except in office); oiling or cleaning moving machinery.	Idem, sec. 13007-6.
	18	18	In, about, or in connection with blast furnaces, docks, or wharves; outside erection and repair of electric wires; running or management of elevator lifts, or hoisting machines or dynamos; oiling or cleaning machinery in motion; operation of emery wheels or any abrasive, polishing, or buffing wheel where articles of baser metals or iridium are manufactured; switch tending, gate tending, track repairing; as brakemen, firemen, engineers, motormen, or conductors, on railroads, railroad telegraph operators, pilots, firemen or engineers upon boats and vessels; in or about establishments wherein nitroglycerin, dynamite, dualin, guncotton, gunpowder, or other high or dangerous explosives are manufactured, compounded, or stored; manufacture of white or yellow	Idem, sec. 13007-3.

[1] Also occupations which require female employees to stand constantly.
* Occupations which require female employees to stand constantly.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit M.	Age limit F.	Prohibited occupations or industries	Citation
Ohio—Continued	------	------	phosphorus or phosphorus matches; in distillery, brewery, or other establishment where alcoholic liquors are manufactured, packed, wrapped, or bottled; in hotel, theater, concert hall, place of amusement, or any other establishment where intoxicating liquors are sold.	
Oklahoma	16	16	Oiling or assisting in oiling, operating, wiping, or cleaning dangerous machinery, or adjusting belt to such machinery, while in motion; operating or assisting in operating circular or band saws, steam boilers, steam machinery or other steam-generating apparatus, rolling-mill machinery, punches or shears, washing, grinding, or mixing mills, or passenger or freight elevators; preparing composition in which dangerous or poisonous acids are used; manufacture of paints, colors or white lead, or of goods for immoral purposes; where acids, dyes, lyes, gases, glass dust or other dust or lint are in such quantities as to be injurious to health; dipping, dyeing, or packing matches; manufacture, packing or storing powder, dynamite, nitroglycerin compounds, fuses, or other explosives.[1]	Comp. Stats. 1921, sec. 7209.
	15	15	Occupations dangerous to health or morals or especially hazardous to life or limb. (Certain exceptions; see law.)	Idem, sec. 7208 (as amended by Acts of 1929, ch. 35.
	14	14	Bowling alley, pool hall, theater, factory, steam laundry	Do.
	16	(2)	Underground in mine or quarry	Idem, sec. 7218.
Oregon	18	18	Engineers, in logging operations; elevator operators	Laws of 1920, secs. 6711, 6712.
Pennsylvania	15	15	As rope or wire walker, acrobat, gymnast, contortionist, rider, etc.; any occupation or exhibition dangerous to health, life, limb, or morals.	Stats., 1920, sec. 13229.
	18	18	Mendicant occupation, etc	Idem, sec. 13230.
	15	15	Singing, dancing, etc., in places where intoxicating liquors are sold.	Idem, sec. 13231.
	16	16	Cleaning moving machinery; elevator operators	Idem, sec. 13289a.
	16	16	Operating or assisting in operating paper-lace machines, power job or cylinder printing presses, stamping machines in sheet-metal and tinware or paper or leather manufacturing or in washer and nut factories, metal or paper cutting machines, corrugating rolls as in corrugated paper or roofing or washboard factories, dough brakes or cracker machinery, wire or iron straightening or drawing machinery, rolling-mill machinery, power punches or shears, washing, grinding, or mixing machinery, calender rolls in paper and rubber manufacturing or other heavy rolls driven by power, or laundering machinery; upon or in connection with any dangerous electrical machinery or appliances; adjusting or assisting in adjusting belt to machinery or in proximity to hazardous or unguarded belts, machinery, or gearing while same is in motion; on scaffolding; heavy work in building trades; stripping, assorting, or manufacturing tobacco; in tunnel, public bowling alley, or pool or billiard room; manufacture of paints, colors, or white lead; preparing compositions in which dangerous leads or acids are used; manufacture or use of dangerous or poisonous dyes; on steam, electric, or other railroad; on passenger or freight boat; operating motor vehicles; in coal or other mine; about blast furnaces; in distillery, brewery, or establishment where alcoholic liquors are manufactured or bottled.	Idem, sec. 13289.
	18	18	Operation or management of hoisting machines; oiling or cleaning machinery in motion; operation or use of polishing or buffing wheel; switch tending, gate tending, track repairing; as brakeman, fireman, engineer, or motorman or conductor on railroad or railway; as pilot, fireman, or engineer upon boat or vessel; in or about establishments wherein gunpowder, nitroglycerin, dynamite, or other high or dangerous explosive is manufactured or compounded; as chauffeur of automobile or airplane.	Do.
	(3)	(3)	Saloon or barroom where alcoholic liquors are sold	Do.
	18	18	Any other occupation dangerous to life or limb, or injurious to health or morals as determined by industrial board of department of labor and industry.	Do.

[1] Also occupations which require female employees to stand constantly.
[2] Minors
[3] Any female.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Philippine Islands.	14	14	Mines, places where explosives are used or manufactured.	Acts of 1923, Act No. 3071.
	16	18	Barroom	Do.
	16	16	Preparation of poisonous, noxious, explosive, or infectious substances; operating elevators; as motormen or firemen; cleaning machinery; work underground.	Do.
	18	18	Work involving serious danger to life [1]	Do.
	16	16	Places where gambling games are carried on	Do.
Porto Rico	16	16	Blacksmith shops; silvering of mirrors; making bread outside of regular hours; perfume and medicinal factories (in which poisonous substances are used); pearl factories (excepting work in nitric acid and polishing with amyl acetate, which may not be done by minor under 18); shops for polishing of diamonds; cigar and cigarette factories and tobacco stripping and sorting shops.	Acts of 1921, Act No. 75, sec. 5 (as amended by Acts of 1925, No. 64).
	18	18	Smelters; tanneries; washing and ironing of clothes of persons affected with contagious diseases; acid and fertilizer factories; stone crushers; sawmills; sugar centrals (in work with machinery); pearl factories, where work is done with nitric acid and polishing with amyl acetate; any other occupation determined by insular commissioner of health to be dangerous to health.	Do.
	16	16	As acrobat, mendicant, contortionist, rope or wire walker, etc.	Idem, sec. 7.
Rhode Island	16	16	Operating or assisting in operating circular or band saws, wood shapers or jointers, planers, sandpaper or wood-polishing machinery, picker machines or machines used in picking wool, cotton, fur, hair, or any upholstering material, paper-lace machines, burnishing machines in tannery or leather factory, power job or cylinder printing presses, wood turning or boring machinery, stamping machines in sheet-metal or tinware manufacturing or in washer and nut factories, machines used in making corrugating rolls, steam boilers, dough brakes or cracker machinery, wire or iron straightening machinery, rolling-mill machinery, power punches, shears, or drop-presses, washing, grinding, or mixing machinery, calender rolls in rubber manufacturing, or laundering or dry-cleaning machinery; adjusting or assisting in adjusting belt to machinery; oiling or cleaning machinery in motion; preparing composition in which dangerous or poisonous acids are used; manufacture or packing of paints, dry colors, red or white lead; stripping, assorting, manufacturing, or packing tobacco; dipping, dyeing, or packing matches; manufacture, packing, or storing of powder, dynamite, nitroglycerin compounds, fuses, or other explosives; in tunnel or pool or billiard room; on steam or electric railroad; in foundry; in any place where dangerous belting or gearing is not provided with proper safeguards; any other work, occupation, place, or process declared by State board of health to be injurious, dangerous, or hazardous.	Gen. Laws, 1923, ch. 85, sec. 6 (as amended by Acts of 1923, ch. 482).
	16	16	As rope or wire walker, gymnast, wrestler, contortionist, equestrian, performer, acrobat; begging, peddling, etc.; any occupation or exhibition dangerous to health, life, morals, or limb.	Idem, ch. 142, sec. 4 (as amended by Acts of 1926, ch. 845).
	18	18	Passenger elevator	Idem, ch. 171, sec. 16
South Carolina	14	14	Cleaning gears, cams, or pulleys, or cleaning in dangerous proximity thereto, while same are in motion by aid of steam, water, electricity, or other mechanical power.	Code, 1922, vol. 2, ch. 7, sec. 32.
South Dakota	16	16	Any occupation dangerous to life, health, or morals	Rev. Codes, 1910, sec. 10015 (as amended by Acts of 1923, ch. 308).

[1] Also occupations which require female employees to stand constantly.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Tennessee	16	16	Repairing machine belts while in motion, in workshop or factory, or assisting therein; adjusting belt to machinery; oiling or cleaning machinery or assisting therein; operating or assisting in operating circular or band saws, wood shapers or jointers, planers, sandpaper or wood-polishing machinery, picker machines, machines used in picking wool, cotton, hair, or upholstering material, paper-lace machines, leather-burnishing machines in tannery or leather factory, power job or cylinder printing presses, emery or polishing wheels used for polishing metal, wood turning or boring machinery, stamping machines in sheet-metal and tinware manufacturing or in washer and nut factories, corrugating rolls as in roofing and washboard factories, steam boilers, steam machinery or other steam-generating apparatus, dough brakes or cracker machinery, wire or iron straightening machinery, rolling-mill machinery, punches or shears, washing, grinding, or mixing mills, calender rolls in rubber manufacturing, or laundering machinery; dipping, drying, or packing matches; in mines or quarries.	Thompson's Shannon's Code 1918, sec. 4342a-46 (as amended by Acts of 1921, ch. 43).
Texas	17	17	Mine, quarry, or other place where explosives are used; or where moral or physical condition is liable to be injured.	Rev. Crim. Code, 1925, art. 1574.
Utah	16	16	In, about, or in connection with preparing of composition in which dangerous or poisonous acids are used; in manufacture of paints, colors, or white lead or of goods for immoral purposes or manufacturing, packing, or storing powder, dynamite, nitroglycerin compounds, fuses, or other explosives; in quarry, mine, coal breaker, laundry, tobacco warehouse, cigar or other tobacco factory, cigar or tobacco store or stand, distillery, brewery, or other establishment where alcoholic liquors are manufactured, packed, wrapped or bottled, theater, concert hall, saloon, or pool room; operating automobile, motor car, or truck; running or management of elevators, lifts, or hoisting machines; in bowling alleys; any other employment declared by State board of health to be dangerous to life or limb or injurious to health or morals.	Comp. Laws, 1917, sec. 1860.
Vermont	16	16	Sewing-machine belts in workshop or factory, or assisting therein; adjusting belt to machinery; oiling, wiping, or cleaning machinery or assisting therein; operating circular or band saws, wood shapers or jointers, planers, sandpaper or wood-polishing machinery, picker machines, machines used in picking wool, cotton, hair, or upholstering material, paper-lace machines, leather-burnishing machines, burnishing machines in tannery or leather factory, power job or cylinder printing presses, emery or polishing wheels for polishing metal, wood turning or boring machinery, stamping machines in sheet-metal and tinware manufacturing or in washer and nut factories, corrugating rolls as in roofing and washboard factories, steam boilers, steam machinery or other steam-generating apparatus, dough brakes or cracker machinery, wood or iron straightening machinery, rolling-mill machinery, punches or shears, washing, grinding, or mixing mills, calender rolls in rubber manufacturing, or laundering machinery; preparing composition in which dangerous or poisonous acids are used; manufacture of paints, colors, or white lead; cigar or other tobacco factory; mine or quarry.	Gen. Laws, 1917, sec. 5835.
Virginia	16	16	Mine; quarry; tunnel; excavation work; brick or lumber yard; operating or assisting in operating dangerous machinery; oiling or assisting in oiling, wiping, or cleaning such machinery; preparing composition in which dangerous or poisonous chemicals are used; manufacture of paints, colors, or white lead.	Acts of 1922, ch. 489, sec. 13.
	16	18	Retail cigar or tobacco store; theater, concert hall, pool, room, bowling alley, place of amusement; hotel, restaurant; steam laundry; passenger or freight elevator.	Do.
Washington	18	18	Begging; indecent or immoral exhibition; any practice or exhibition dangerous or injurious to life, limb, health, or morals.	Rem. and Ball. Codes and Stats., 1910, sec. 2446.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit M.	Age limit F.	Prohibited occupations or industries	Citation
Washington—Continued	16	(1)	Underground mine	Acts of 1917, ch. 36, sec. 165.
	14	(2)	Surface working	Do.
West Virginia	18	18	Playing on musical instruments; begging or singing upon streets or highway.	Code of 1913, Sup. 1918, sec. 5177.
	16	16	Any occupation dangerous to life or limb or injurious to health and morals; in mine, quarry, tunnel, or excavation; as gymnast, contortionist, rope or wire walker, circus rider, acrobat, or clown; in immoral exhibition, etc.	Acts of 1919, ch. 17, sec. 2.
Wisconsin	(3)	(3)	Occupation dangerous or prejudicial to life, limb, health, safety.	Stats., 1923, sec. 103.05 (2).
	18	18	In or about blast furnaces; in passenger and freight boats and vessels; as pilot, fireman, or engineer; in or about docks; operating or using any emery, tripoli, rouge, corundum, stone carborundum, and abrasive or emery polishing or buffing wheel, where articles of the baser materials or iridium are manufactured; outside erection and repair of electric wires, including telegraph and telephone wires; running or management of elevators, lifts, or hoisting machines; in or about establishments where nitroglycerin, dynamite, dualin, guncotton, gunpowder, or other high or dangerous explosives are manufactured, compounded, or stored; dipping, dyeing, or packing matches; in or about mine or quarry; oiling or cleaning dangerous or hazardous machinery in motion; on street railways and interurban railroads; switch tending, gate tending, or track repairing; as brakeman, fireman, engineer, motorman, conductor, or telegraph operator; in or about wharves.	Idem, sec. 103.05 (3).
	16	16	In or about dough brakes or cracker machinery; adjusting belts in motion; sewing belts; operating steam boiler or steam-generating apparatus; as pin boys in bowling alleys; on scaffolding or ladder; in heavy work; burnishing machines in tannery or leather manufacturing; corrugating rolls in roofing or washboard factories; occupations causing dusts in injurious quantities; emery or polishing wheel for polishing metal; manufacture of goods for immoral purposes; punches or shears, iron and steel, wire or iron straightening machinery; laundry machinery; in or about store, brewery, distillery, bottling establishment, hotel, barroom, saloon, saloon dining room, or restaurant; any place in connection with saloon or similar place; in or about any dance hall, bowling alley, beer garden, or similar place in which strong, spirituous, or malt liquors are made, bottled, sold, or given away; oiling or assisting in oiling, wiping, or cleaning machinery in motion; operating or assisting in operating or taking material from any circular or band saw, cross-cut saw or slasher, or other cutting or pressing machine from which material is taken from behind; manufacture of paints, colors, or white lead; manufacture or preparation of compositions in which dangerous or poisonous acids are used, of compositions of dangerous or poisonous dyes, of lye, or in which the quantity thereof is injurious to health; cylinder or job, boring or drill presses; washing, grinding, or mixing mill, or calender rolls in rubber manufacturing; stamping machines in sheet-metal and tinware manufacturing, in washer and nut factory, or lace-paper and leather manufacturing; theater or concert hall; in tobacco warehouse, cigar or other tobacco factory; wood shaper or jointer, planer, sandpaper, wood polishing, or turning machine; carding machine, or machine used in picking wool, cotton, hair or any upholstering material; any other employment dangerous to life, limb or injurious to health or morals.	Do.
	------	17	(4)	Do.
	------	(5)	Mine, quarry	Do.
	------	21	Bell hop in hotel	Do.

1 Minors.
2 Any female.
3 Occupations which require female employees to stand constantly.

LEGISLATION GOVERNING DANGEROUS TRADES TO MINORS—Continued

State	Age limit		Prohibited occupations or industries	Citation
	M.	F.		
Wyoming	16	16	Sewing machine belts in workshop or factory, or assisting therein; adjusting belt to machinery; wiping or cleaning machinery, or assisting therein; operating circular or band saws, wood shavers or joiners, planers, sandpaper or wood-polishing machinery, picking machines, machines used in picking wool, cotton, hair, or upholstering material, paper-lace machines, burnishing machines in tannery or leather factory, job or cylinder printing presses, emery or polishing wheel for polishing metal, wood turning or boring machinery, stamping machines in sheet-metal and tinware manufacture or in washer and nut factories, machinery used in manufacture of roofing and washboards, steam machinery or other steam-generating apparatus, gas engine or machinery operated by gas, machinery or apparatus used in generating or distributing electricity, machinery operated by electricity, dough brakes or cracker machinery, wood or iron straightening machinery, rolling-mill machinery, metal punches, drills, or shears, metal lathes, washing, grinding, or mixing mills, calender rolls in rubber manufacture, or laundering machinery; preparing or handling composition in which dangerous or poisonous chemicals are used; manufacture of paints, colors, or white lead; in cigar or other tobacco factory; in any place where gunpowder, dynamite, or other dangerous explosive is manufactured, compounded, or stored; in handling any dangerous explosive; in or about mine, quarry, or smelter; manufacture, distribution, or sale of goods for unlawful or immoral purposes; any other occupation, trade, employment, or place declared by child labor commission to be dangerous, injurious, hazardous, or prejudicial to life, limb, health, safety, welfare, or morals.	Comp. Stats., 1920, sec. 3880 (as amended by Acts of 1923, ch. 48, and Acts of 1925, ch. 11).
	14	14	Dancing; rope or wire walking; as rider or acrobat; peddling; as gymnast, contortionist, etc.; any occupation or exhibition injurious to health or dangerous to life or limb (certain exceptions in regard to singing and playing musical instruments).	Idem, sec. 3862.
	------	18	(1)	Idem, sec. 3882.

[1] Occupations which require female employees to stand constantly.

Recommendation by Employers for Discontinuance of Night Work for Women and Minors in Cotton Mills

AN ANNOUNCEMENT issued by the Cotton Textile Institute (Inc.) under date of September 24, 1930, states that at a meeting held in New York City that day the board of directors of the institute had unanimously recommended the discontinuance of night work for women and minors in the cotton mills of the United States. The directors voting upon the question represented 7,551,842 spindles, while 20 others who were not present at the meeting but who had previously expressed their indorsement of the principle, represented 3,551,147 spindles. The vote, as carried, recommended that the employment of women and of minors under 18 years of age in cotton mills should be discontinued between the hours of 9 p. m. and 6 a. m., as soon as possible and not later than March 31, 1931. A strong sentiment was manifested in favor of making the period of discontinuance even longer than from 9 p. m. to 6 a. m.

Since the above item went to print, the institute, at a meeting held in New York, October 15, has taken formal action upon the recommendation. The New York Times, in its issue of October 16, gives

an account of the meeting from which the following paragraph is taken:

> In opening the convention Mr. Hines offered a concrete plan by which night work for women and minors could be eliminated gradually. This plan suggested a progressive acceptance of the policy by 75 per cent of the industry in the first year, by 80 per cent in the second year, and by 85 per cent in the third year and thereafter, the plan to become operative after March 1, 1931. Night work was defined as the hours between 7 p. m. and 6 a. m.

An oral vote taken upon this proposition was practically unanimous. Approval of the plan had already been expressed by mills representing something over 20,000,000 spindles, or 64 per cent of the industry as a whole, so that its general acceptance is regarded as certain. It will be noticed that the term "night work" has been so defined as to cover a longer period than was at first proposed.

INDUSTRIAL ACCIDENTS AND SAFETY

Cost of Industrial Accidents to the State, the Employer, and the Man[1]

By H. W. Heinrich, Assistant Superintendent, Engineering and Inspection Division, Travelers Insurance Co.

THE costs of industrial accidents, as determined by any accepted method of calculation, are so high that careful consideration of the reasons for the occurrence of such accidents, and of ways and means to reduce them, becomes a responsibility not only of industry but likewise of all branches of society that are concerned. This includes the employer, and likewise the ultimate consumer or the general public, who in the last analysis must bear the whole cost of industrial activities. It includes the insurance companies whose program, based as it must be upon their ability to project past experience into rates for future use, is dependent upon conditions that are measurable and under a reasonable degree of control. Federal, State, and municipal legislative, executive, and advisory bodies, and labor unions, are also directly concerned. In short, the cost of industrial accidents places upon society in general a tremendous burden of responsibility, which is exceeded only by the concurrent responsibility for loss of life and limb due to the same cause.

The limitation of this present discussion to accident cost alone needs no apology or defense. The moral and humanitarian obligations that are involved in accident prevention are thoroughly appreciated, and a sufficiently complete understanding of them by the employer and the employee may be taken for granted. If a fuller appreciation of accident costs proves to be a sufficient incentive to lead to additional efforts to reduce accident frequency, the objective of this present discussion of costs will be achieved.

Compensation Payments Do Not Represent Whole of Accident Cost

THERE are two kinds of accident costs—direct and indirect. Direct cost comprises expenditures incurred in consequence of claims under the provisions of compensation laws, and of the medical aid required by law. Together these items amount to about $312,000,000 annually for the United States. This estimate, however, does not include cost data for States where there is no compensation law, nor for claims and medical costs arising under *liability* laws in compensation States, nor for the millions of minor-injury accidents and no-injury accidents for which no compensation is required by law, but which nevertheless create expense.

The number of industrial fatalities in the United States is estimated to be 25,000 annually, and the number of all lost-time injuries,

[1] Read before seventeenth annual meeting of the International Association of Industrial Accident Boards and Commissions, held at Wilmington, Del., September 22–26, 1930.

including the fatalities, 3,000,000. From data compiled by Travelers Insurance Co. engineers it is concluded that approximately 29 minor injuries occur for each serious injury. The number of minor injuries therefore is something like 87,000,000 per annum.

In addition to these major and minor injuries there are many other accidents which result in no injury whatever, but which create considerable cost. Reference is made here not to mere errors, as that word is usually interpreted, but to actual narrow escapes from injury, as when an employee slips and falls from a ladder but fortunately sustains no bodily harm. There can be no question about such an occurrence constituting a true accident. In considering only such types of no-injury accidents, research shows that there are 300 of these for each major injury (i. e., one of the kind ordinarily reported to compensation commissioners or to insurance companies as a fatality or a compensable accident), or an annual total of some 900,000,000.

The direct cost of no-injury accidents may be negligible, but the indirect cost, although it can not be calculated accurately, is nevertheless a substantial part of the huge over-all industrial accident cost.

Travelers' engineers estimate the indirect or hidden cost of all industrial accidents to be *four times* as great as the compensation and medical payments. Expressed in another way, compensation payments constitute only one-fifth of the total employer accident-cost. This estimate is based upon careful and conscientious research, which now includes no less than 10,000 cases taken at random from claim files. Its accuracy has been demonstrated by application to scores of specific plants.

The 4 to 1 proportion does not necessarily hold true with regard to any one industrial accident, nor for any one individual plant, and it is granted that in nation-wide application the ratio may vary; yet it has already been tested sufficiently to provide approximate confirmation of the facts.

Accidents Cost More Than Five Billion Dollars Annually

An approximation to the total cost of the industrial accidents (of all kinds) that occur annually in the United States may be reached as follows, on the assumption that the "hidden costs" are four times as great, on the average, as the visible and recognized ones.

From data available at the Bureau of Labor Statistics, Department of Labor, Washington, D. C., it is estimated that the total amount of compensation paid to injured workers is $240,000,000 per year, not including an additional $72,000,000 paid for hospital treatment and medical aid. This constitutes a total of $312,000,000 incurred because of 2,107,000 injuries to 19,683,500 workers. From these data the direct cost under compensation of a single injury is estimated to be $148. To this should be added the legal and administrative costs required in the distribution of the benefits to the injured workers, such as are ordinarily paid in the form of compensation insurance premium by the employer to his insurance carrier. The total direct cost of an average injury is thus increased to $246. With these data as nuclei and with the assumption that injuries not subject to compensation laws entail losses that may be estimated in the same way, the following cost table has been prepared.

ESTIMATED ANNUAL DIRECT, HIDDEN, AND TOTAL COST OF INDUSTRIAL ACCIDENTS IN THE UNITED STATES

Nature of accidents	Direct cost	Hidden cost	Total
3,000,000 compensable injuries, at $246 each, including 25,000 fatalities	$738,000,000	$2,952,000,000	$3,690,000,000
87,000,000 minor injuries, at $2 each	174,000,000	696,000,000	870,000,000
900,000,000 no-injury accidents at $0.50 each		450,000,000	450,000,000
Total annual cost			5,010,000,000

At this point it may be of interest to give a résumé of an explanatory article, dealing with the 4 to 1 ratio of hidden costs to recognized ones, which appeared in The Travelers Standard for November, 1927.

Factors in the hidden cost to employers, of injuries to employees

[Excluding compensation and liability claims; excluding medical and hospital cost; excluding insurance premiums; and excluding cost of lost time, except when such cost is actually paid by the employer without reimbursement.]

1. Cost of lost time of injured employee.
2. Cost of time lost by other employees who stop work—
   (*a*) Out of curiosity;
   (*b*) Out of sympathy;
   (*c*) To assist injured employee; or
   (*d*) For other reasons.
3. Cost of time lost by foremen, supervisors, or other executives, as follows:
   (*a*) Assisting injured employee;
   (*b*) Investigating the cause of the accident;
   (*c*) Arranging for the injured employee's production to be continued by some other employee;
   (*d*) Selecting training, or breaking in a new employee to replace the injured employee; and
   (*e*) Preparing State accident reports, or attending hearings before industrial commissioners.
4. Cost of time spent on the case by first-aid attendant and hospital department staff, when this time is not compensated by insurance.
5. Cost due to injury to the machine, tools, or other property, or to the spoilage of material.
6. Cost due to interference with production, failure to fill orders on time, loss of bonuses, payment of forfeits, and other similar causes.
7. Cost under employee welfare and benefit systems.
8. Cost in continuing the wages of the injured employee in full, after his return—even though the services of the employee (who is not yet fully recovered) may for a time be worth only about half of their normal value.
9. Cost due to the loss of profit on the injured employee's productivity, and on idle machines.
10. Cost of subsequent injuries that occur in consequence of the excitement or weakened morale due to the original accident.
11. Overhead cost—the expense of light, heat, rent, and other such items—which continues while the injured employee is a nonproducer.

This list does not include all of the points that might well receive consideration, although it clearly outlines the vicious and seemingly endless cycle of events that follow in the train of accidents.

The application of this set of factors to specific cases is illustrated by the following typical examples, taken from actual experience.

Example No. 1

Total cost of compensation and medical aid	$209
Total additional cost, paid directly by the employer	937

The following accidents occurred in a building-erection job:

Number of accidents	Type of injury	Cause	Compensation and medical cost
3	Fractures and contusions	Material hoist	$106
18	Rivet burns, cuts, bruises	Miscellaneous operations	76
21	Falling materials	do	15
30	Slips and falls	do	12

The hidden cost was computed as follows:

Time lost by injured employees, paid directly by the employer	$116
Time lost by other employees in consequence of accidents	310
Time lost by foremen and superintendent as a result of the accidents	78
Property damage	158
Payment of forfeits (2 days) for failure to complete the job on time	200
Portion of overhead cost loss during delay due to accidents	75

An interesting point developed by this analysis is indicated by the relatively high cost to the employer, on account of the time lost by employees other than those who were injured. This was due chiefly to one of the material-hoist accidents. Shaftway inclosures were not maintained, as good practice demanded, and one employee, who was working in the vicinity of the hoist, was injured when he carelessly allowed a heavy plank to project into the path of the ascending car. The hoisting cables were torn from their fastenings, permitting the car to drop. Labor on the upper tiers was necessarily suspended pending the completion of the consequent repairs.

Another feature worthy of note is the loss due to forfeits. The contractor himself estimates that delays caused by the accidents interfered with the completion of the job at the time agreed upon, thereby penalizing him to the extent of $200.

Example No. 2

Total cost of compensation and medical aid	$66
Total additional cost, paid directly by the employer	275

This example was obtained from the records of a certain hardware-manufacturing plant, and covers an experience of six months.

The following accidents occurred:

Number of accidents	Type of injury	Cause	Compensation and medical cost
1	Lost nail of index finger	Punch press	$61.50
1	Lacerated forearm	Baling press	4.50
9	Cuts on hands	Handling sheared metal	.00
10	Slips and falls—dropping objects	Miscellaneous operations	.00

The hidden cost was computed as follows:

Value of labor and material in connection with canceled order	$107
Time lost by injured employees (paid by employer)	36
Time lost by other employees in consequence of the accidents	34
Cost of repairs to stamping dies	33
Unearned wages (the employer paid a slightly injured skilled employee 10 days' full wages—$6.30 per day—receiving in return unskilled labor worth $2.50 per day)	38
Time lost by foremen and superintendent as a result of the accidents	27

The visible direct cost in this example lay in the relatively infrequent serious accidents, while close analysis shows that a large part of the hidden cost was due to the trivial injuries.

One of the injuries described on the employer's records as "Slips and falls—dropping objects" occurred to a toolmaker who, on account of laxity in supervision, was indulging in a bit of gossip while operating an engine lathe. His attention being temporarily diverted from his work, he allowed the lathe tool to feed into a shoulder of a jig that was mounted on the face plate of the lathe, tearing the work loose from the face-plate clamps and causing it to drop upon his fingers and jam them against the lathe bed. The jig (original value $48) was ruined. Its cost has not been included, however, because the jig was merely being repaired for stock, and its actual value at the time of the accident was difficult to ascertain. What is of more interest is the fact that this skilled toolmaker was unable, on account of his bruised and bandaged fingers, to undertake the building of a set of blanking dies that were ordered the same day that the accident occurred. Another toolmaker was employed for that purpose, and the injured man was transferred to work requiring less skill. Thus for a time the employer paid the wages of two skilled men and received in return little more than the labor of one.

The punch-press injury is also of interest from the viewpoint of incidental cost. Orders had been issued to the effect that the press-room foreman must be called in case stock became jammed in the dies. These orders were not rigidly enforced, and one of the press operators, observing that a blank had been pulled up by the punch so that it obstructed further feeding, tried to remove it with a metal rod and accidentally stepped on the clutch pedal at the same time. The dies were thrown out of alignment and seriously sheared, and at the same time the employee's finger was nipped under the spring stripper plate. The delay incidental to repairs in this case was sufficient to cause cancellation of the order on which the operator was working, thus creating a labor and material loss of $107, according to the manufacturer's statement.

Example No. 3

Total cost of compensation and medical aid	$59
Total additional cost, paid directly by the employer	262

Following is the cost record of 36 injuries in an average woodworking plant manufacturing interior trim and doing some cabinet work.

Number of accidents	Type of injury	Cause	Compensation and medical cost
1	Hand severely cut	Jointer	$51.00
15	Cuts and bruises	Handling material	5.00
10	Slips and falls—falling objects	Miscellaneous operations	3.00
1	Finger slightly lacerated	Band saw	.00
1	Bruised forehead	Struck against machine	.00
8	Miscellaneous cuts and bruises	Hand tools	.00

The hidden cost was computed as follows:

Time lost by injured employees in consequence of accidents (paid by the employer)	$48.00
Cost of time lost by other employees	116.00
Time lost by foremen and superintendents as a result of the accidents	79.00
Spoilage of material	11.40
Broken and damaged tools	7.60

Here again a significant feature of the example is that the cost due to the time lost by employees other than those who were injured was greater than the cost of the time lost by the injured employees themselves. A part of this cost occurred because fellow workers crowded about in sympathy or curiosity or while giving assistance to the injured employees, but the major portion was due to the fact that a certain foreman, who for a period of one week was obliged to operate a production machine, was not readily available for consultation. The situation existed as a result of a preventable accident on a partially guarded jointer. That machine was being used at the time as a molder, and it was vital that production be continued. The foreman happened to be the only remaining available skilled operator. While he was engaged in running the jointer, considerable delay and confusion existed in his department. Employees in need of instruction and advice were obliged to wait. Loss of production is not included in my estimate of incidental cost, but the lost time of uninjured employees in itself constitutes an item worthy of consideration.

Minor Accidents Cause Huge Losses

THESE examples include no fatalities, dismemberments, or permanent injuries. Such omission is deliberate and does not affect the ultimate ratio. To be sure, there are many fatalities which result in a direct cost of thousands of dollars, against a relatively small hidden cost. On the other hand there are just as many cases, or even more, where a minor accident costing but a few dollars in compensation or medical aid has caused an additional hidden loss of staggering proportions as illustrated by the following:

An employee of a steel-construction contractor, who was tending the guide rope while a huge steel girder was being hoisted, stumbled, bruised his shin, lost his grip on the rope, and allowed the girder to swing and strike against a column. The jar displaced the clamps, causing the girder to tilt, slip, and crash down upon a sidewalk shed, demolishing a section of scaffolding in its descent and damaging a

hoisting engine seriously. The resultant property damage and delay cost the contractor several thousands of dollars in addition to the relatively slight medical cost of treating the employee's bruised leg.

Accident cost in the aggregate, as measured by compensation and medical payments, is made up of the greater volume of low-cost minor injuries, rather than the lesser volume of high-cost fatalities and serious injuries.

Were it fair to do so, an apparently stronger defense for this 4 to 1 ratio could be established by citing cases such as the following:

1. A premature quarry blast, set off inadvertently by an employee who became startled by a slight injury, resulted in serious damage to six drill rigs and a steam shovel. This equipment was buried under tons of rock and the total loss was over $10,000.
2. The flooding of a tunnel occurred as the direct result of a minor injury. The loss amounted to over $25,000.
3. A slight injury to a lineman caused him to drop a coil of wire, resulting in a short circuit. This led to claims against the power company, and a loss of several thousand dollars.
4. An injury to an engineer, who was adjusting the stuffing box of a large steam engine while the engine was in operation, caused him to drop a wrench into the path of the moving crosshead. The cylinder head was broken and the engine was thrown out of alignment and badly wrecked.
5. An explosion of a japanning oven (loss $17,000) was the result of an error on the part of a workman whose attention was diverted by a minor accident.

The original estimate of the hidden costs that are here emphasized was published in December, 1926.[2]

From further research the following conclusions are drawn:

1. Recently acquired data show a tendency toward a still higher ratio of "incidental" cost to direct cost.
2. The hidden cost of noncompensable injuries is about one-half of the total direct cost of all compensable injuries. (These injuries are of a type not usually reported, either to State compensation boards or to insurance companies.)

Analysis Required to Prevent Accidents

ALTHOUGH the present paper is not intended to discuss the prevention of accidents, it may not be out of place to say that prevention depends upon two essential elements:

1. Accident-cause analysis by a trained safety engineer.
2. The will, on the part of the employer, to take proper action.

The first of these essentials is readily available to-day; the second is in vital need of additional strength. The employer must be awakened. He must realize that the prevention of accidents is "good business." He must so indorse it—must give it his backing, and place it in his plant on a par with production and sales. To do this he needs a newer and stronger incentive than he has heretofore had, and the tremendous financial burden that he bears because of the hidden cost of accidents constitutes such an incentive.

The total direct and hidden costs of industrial accidents—including those previously described as no-injury accidents—in consideration of all pertinent factors, is a matter of billions of dollars annually.

[2] Heinrich, H. W., "The incidental cost of accidents." The Travelers Standard, December, 1926. See also the Proceedings of the Tenth Annual Industrial Congress, New York State Department of Labor, pp. 244 to 257, inclusive; and Manufacturing Industries for January, 1927.

Compensation Insurance Premium Measures Direct Accident Cost

THE employer pays this cost out of his own pocket. Insurance acts as a loss shock absorber—a leveling device which smooths out the accident-cost curve and permits him to estimate his accident cost in advance of mishaps. The cost of insurance is chiefly an accident cost, and the burden must rest first of all upon the employer. How tremendous the burden is that the direct cost of accidents throws upon the employer is well portrayed by the compensation insurance rates that experience proves to be necessary. Expressed in the language of industry, these rates average 1.2 per cent of the entire pay roll, and in the case of certain classifications in specific localities they sometimes exceed 25 per cent of the pay roll.

All Accident Costs Are Passed Along to the Individual

THE employer charges this cost against operating expenses and passes it on to the consumer as a part of the price of his product or service. This is true, likewise, of the *hidden* costs of accidents. Thus it must be recognized that, to the physical suffering, deprivation, want, misery, and loss of wages borne by the individual, he must, because of the occurrence of industrial accidents, assume also all of the direct and hidden costs of the accidents in dollars which are first paid by the employer. Although these costs, in common with all other operating and manufacturing costs, are thus relayed to the general public, the employer is handicapped in his efforts to attain the ideal situation, which is generally that of small profit, large volume, and low-cost product.

The cost of industrial accidents thus passed along to the individual decreases the purchasing power of the dollar. It lowers the standard of living, reduces the consumption of manufactured product, and makes for hard times. Expressed definitely in terms that may impress the *salaried worker*, industrial *accident cost* represents a *tax of 11 per cent annually on his income*.

Accidents Cause Loss to the State as Well as to the Individual

THE State suffers also. Increased accident frequency and increase in cost of severity entail greater legal, executive, and administrative State expenditures. In fact, the interests and progress of the State depend almost wholly upon the prosperity of its population. Even though the wealth of a nation may be said to lie in part in its natural resources, yet it is true that these are of value only as they are made use of through the intelligent work of an able-bodied population. The State therefore suffers from the cost of accidents in exact ratio to the sufferings and loss of its citizenry.

The cost of industrial accidents has been treated in this paper chiefly from a monetary point of view. The other phases of cost, however, that affect the injured employee and his dependents directly have a far from remote effect upon the employer and upon the State as well.

The occurrence of accidents in industry destroys morale and good will; it plays havoc with the prestige, reputation, and character of

the industrial establishment; and in many other ways it entails a kind of cost that can not readily be measured in terms of dollars, but which is nevertheless a tangible fact.

Whatever may be the variations in accident-cost calculations, it is an admitted fact that these costs are burdensomely high. They should be reduced, and they can be reduced. A general awakening to a better realization of the facts is taking place. Accident prevention is establishing itself as an integral part of business management, and is rightfully being considered in discussions of national problems in general.

Industrial Accidents Can Be Reduced 50 Per Cent

A 50 per cent reduction in present accident frequency and cost can be accomplished readily and practicably and with little expense, when accident prevention is recognized as a science and when its fundamentals or principles are better understood and applied.

So far as the consideration of the cost of industrial accidents to the employer, to the State, and to the man, creates interest and serves as an incentive to action, it may well be considered an important factor in the accomplishment of a worth-while objective.

Safety Standards in Industry [1]

By Cyril Ainsworth, Safety Engineer, American Standards Association

DURING the past few years such great stress has been placed on the educational phase of accident-prevention work that the prevention of accidents through engineering revision, the installation of safeguards, and other methods of removing physical hazards does not seem to have been given the consideration it deserves by safety conferences, industrial groups, individual industrial establishments, and individual safety engineers.

However, it does not seem necessary to convince you of the great importance of basic safety standards. They are the consensus of what is absolutely necessary for the protection of human life; they are the sum total of hundreds of thousands of accidents and, in the words of Mr. Lewis De Blois, in his paper on "The necessity for safety standardization":

> They are the only worth while by-products of accidental injury. If we did not collect such knowledge and apply it intelligently to the prevention of accidents we would be as irresponsible as children and little better than savages. Such information is virtually priceless, for it has been bought and paid for with blood and suffering and human life itself.

Assuming that this picture of the value of safety standards is agreed to, let us examine in what way this exceedingly valuable knowledge is being collected and developed into safety standards for the use of industry.

There are three groups which are principally active in this field. They are: (1) Governmental agencies such as industrial commissions

[1] Paper read at the Nineteenth Annual Safety Congress of the National Safety Council, held at Pittsburgh, Sept. 29–Oct. 3, 1930.

and departments of labor and industry; (2) the National Council on Compensation Insurance, a semigovernmentally controlled body representing the stock, mutual, and State fund casualty insurance interests, whose safety standards form the "industrial compensation rating schedule"; and (3) the American Standards Association, the safety standards of which are known as the National Safety Codes. Some may feel that the National Safety Council should be considered part of this group developing safety standards, but it has not been included in this group from the point of view that the National Safety Council produces safety practices pamphlets, which are not, strictly speaking, standards or codes.

The governmental agencies were one of the first groups to enter the accident-prevention field and to develop safety standards. In fact, before the accident-prevention movement had really gotten under way there had been created in several States departments of factory inspection charged with the duty of inspecting factories for the removal of accident hazards and the enforcement of a few laws which had been passed to improve general factory working conditions.

The laws, being very general in their nature, gave the inspector only a small amount of definite information as to the methods he was supposed to use in requiring the elimination of accident hazards. He was further handicapped by the fact that he had very little accident-prevention knowledge, but that is not surprising, because the movement had hardly started and not many people had such knowledge. Only a few, if any, of the workmen's compensation laws had been passed, and therefore accident reports were not being given close study in order to determine ways and means of removing the causes of accidents. The inspector had to use his own common sense. This, however, permitted him to present, in his annual report to the governor of his State, the knowledge which he had obtained in his work concerning methods of preventing industrial accidents, and these comments can rightfully be recognized as some of the first safety standards that were ever written.

From this very small beginning we find the accident-prevention work of governmental agencies growing steadily and effectively. Departments of labor and industry and industrial commissions were created with full rule-making power and complete enforcement authority. Workmen's compensation and accident-reporting laws were passed, making it possible to develop a detailed analysis of the accidents occurring in the several States, thereby giving them information on which to base the regulations which have developed and are called "safety standards."

You are probably thoroughly familiar with the conditions which brought about the development of the industrial compensation rating schedule by the National Council of Compensation Insurance. It did not take many years for the individual insurance companies to realize that more effective work could be done if they were applying a single group of specifications than would be the case if each one developed its own safety standards. This is a matter of common knowledge among those interested in the accident-prevention movement, and I need not dwell upon it any further.

The American Standards Association came into the field in 1919. At the suggestion of the National Safety Council, the Bureau of

Standards of the United States Department of Commerce sponsored two conferences at Washington to consider the advisability of standardizing the efforts of the several agencies that were developing safety standards. Complete agreement on this was expressed at the conferences, and it was finally decided that national safety codes could best be prepared under such a procedure as had been set up by the American Engineering Standards Committee, as the American Standards Association was at that time known. A safety group was added to the membership and a national safety code committee, called the Safety Code Correlating Committee, was formed to act as an advisory committee in relation to the development of national safety codes. This committee has held one of its regular meetings in connection with this congress of the National Safety Council.

Approximately 27 national safety codes have been developed and approved under this procedure, and many more are under process of development.

It might be well to examine just what the situation is as a result of the activities of these three groups. While for some time the National Council for Compensation Insurance and the American Standards Association continued to develop their own safety standards without thought of bringing them into harmony, the service on the American Standards Association code committees by insurance representatives and the experience of insurance companies in applying their standards in communities over which governmental agencies had jurisdiction soon brought about the desire that the codes of the American Standards Association and the insurance compensation rating schedule be brought into complete harmony. It is now the policy in connection with changes in the national schedule that the two groups of regulations shall be made to coincide. This work has been very nearly completed, and it can be said without any very great stretch of the truth that there is now but one national group of safety codes.

This, then, leaves us with the governmental situation to consider. It is to be regretted that a better report of this field can not be made. In order to show you clearly what has happened in connection with the development of one phase of the most basic of safety standards, that governing mechanical power transmission apparatus, may I again quote from the paper of Mr. De Blois, referred to at the beginning of this discussion, because Mr. De Blois's study represents the first real effort made to obtain a true picture of the safety-standards situation in the United States. Mr. De Blois's study particularly covers the requirements for the guarding of gears. This was selected because gears represent one of the simplest hazards and therefore would seemingly require the same method of guarding in all sections of the United States.

Taking up first the matter of coverage of the gears, Mr. De Blois reports that two States make no attempt to define it. One State demands protection for all gears wherever located, four States agree on all gears exposed to contact, and another State makes it "all power gears exposed to contact." Four States, however, agree on the American Standards Association and the industrial compensation rating schedule definition—"all gears wherever located except adjusting gears which do not normally revolve."

When we consider the general provisions for protection we encounter an amazing tangle. There are three well-known methods of guarding the teeth and mesh point: (1) By inclosing the gears in a close-fitted inclosure of solid metal or mesh; (2) by surrounding the teeth with a ribbon of metal which has flanges projecting inward beyond the roots of the teeth; or (3) by erecting a fence of mesh or a railing at some distance from the gears.

Four of the thirteen States require either casings or ribbons, two more are willing to have casings or ribbons or will permit fences under special conditions which do not coincide at all. This, however, is all the uniformity that one finds.

Mr. De Blois continues to point out the various methods of guarding gears and removing spoke hazards that are contained in the various State regulations. Neither Mr. De Blois in his original paper, nor myself in this paper, desire to present a picture of ridicule of the work of the governmental agencies. Having been an officer in one of the important State departments of labor, I realize fully the value of the accident-prevention work which such agencies have done, and believe that they form one of the most important groups upon whose shoulders rests the burden of producing a reduction in the accident toll of the future. In fact, I am willing to take the floor at any time to debate this subject with anybody who feels that such agencies have little or no place in the accident-prevention group.

I have presented this picture as a partial answer to the question that has been raised many times as to what is wrong with the accident-prevention movement in that it does not make greater progress than it has during the past 10 or 15 years. Surely there can not be so many correct ways of guarding gears operating under similar conditions. Some of these specifications can not be right, and the accident-prevention movement is being seriously hampered by the fact that there are on the statute books, in Government regulations and other types of safety standards, specifications for the removal of accident hazards which are not basically correct or which can be so misinterpreted as to permit methods to be used which are not basically correct.

With this thought in mind we must look for a remedy to the situation. The one remedy which presents itself at this time is that of obtaining, through the use of national safety codes which are developed by all parties now interested in the development of safety standards, a greater degree of uniformity and accuracy in methods of removing physical accident hazards.

A great deal of encouragement has been given through the recent action taken by the various governmental agencies at their annual convention in Louisville, Ky., last May. At that time a special committee which had been appointed to study this particular situation recommended to the association that the several States, in developing their own safety standards, should use the National Safety Codes as the basis of their work. A resolution approving and indorsing this recommendation was unanimously passed.

Further encouragement is given by the attitude shown by several regulatory bodies in their individual consideration of the development of safety codes. This can best be shown by quoting from the foreword of the newly adopted safety code of the State of Nebraska.

In speaking of the adoption of the regulations, this foreword states, in part, as follows: "They are based on recognized safe practices and on the provisions of the National Safety Codes approved by the American Standards Association, which safety codes are hereby adopted by the Nebraska Department of Labor, and shall apply in all cases not specifically covered by the Nebraska regulations." It is true that Nebraska is not an important State industrially, being primarily agricultural, but it bears just as important a relation to the accident record of the country as a whole as does a small plant in a particular State to the record of the State as a whole. Any constructive policy similar to that taken by Nebraska is bound to have a wholesome effect on the accident record of the country.

This would seem to point the way toward a painting of the picture which I have presented in brighter colors in the very near future, but the whole burden for straightening out this difficult situation does not by any means lie entirely in the hands of governmental agencies. Industry in general and the individual safety engineer have a very definite part in this extremely important phase of the accident-prevention program.

There have been brought to my attention cases where the efforts of governmental agencies to use national safety codes in their own safety standard work have been vigorously opposed by some of the basic industries coming under their jurisdiction. This opposition has been based on the grounds that it is not necessary to go outside the borders of the State to obtain the necessary information on which to develop safety standards, and that the standards should be developed to meet the particular needs of that certain community. These industries have lost sight of the fact that their governmental agencies are taking an advanced step in accident-prevention work and are using the utmost effort to obtain the best information available on the particular subject under discussion.

In other cases we find national trade associations that have opposed the development of national safety codes on the basis that they will be adopted as hard and fast laws. As a matter of fact they have been used by governmental agencies, not in hard and fast laws of the legislature as claimed, but in flexible, enforceable, and practical regulations of governmental regulatory bodies that are in a position to apply the regulations with the utmost discretion and to make such changes as might be found necessary in order to remove hardships brought about through the improper interpretation or improper application of the regulations.

In one particular case such opposition has resulted in a delay of several years in the preparation of a group of specifications for an industry which has one of the worst accident records of any industrial group.

It is appreciated that the individual industrial establishment must follow the legal requirements of the State in which it is located and that it therefore can not use the national safety codes where conflict exists between these codes and the governmental agency which has jurisdiction. However, it is of vital importance that each industry and each individual safety engineer become thoroughly acquainted with the provisions of the national codes which have already been developed and to take an active interest in the development of those that are now being prepared.

It is of vital interest to the accident-prevention movement that all industrial establishments cooperate fully with the governmental agency having jurisdiction over it. They should encourage its efforts to secure the adoption of safety standards which will permit manufacturers to furnish machines equipped with guards which are a part of the inherent design of the machine. They should encourage their governmental agency in its efforts to remove the friction which now exists through the enforcement, by different groups of safety inspectors, insurance and governmental, of safety standards which are directly opposed to one another, and which thereby create in the mind of the plant owner a very unfavorable attitude toward the various groups of inspectors and the accident-prevention movement in general.

To my mind one of the biggest problems in connection with the reduction of the number of accidents which are annually occurring under any jurisdiction lies in the accident-prevention work which can be done in the small plant. The insufficient appropriations which are given to governmental agencies do not make it possible for them to employ a sufficient number of safety engineers to permit frequent visits to be made to this class of establishment. Therefore, any movement which would make it possible for the small plant to receive from the manufacturer mechanical equipment completely guarded according to the best recognized practices would tend to have a very great influence on the accident situation.

Word has come from the machine-tool industry that it is ready and willing to do all that it can toward the equipping of machines with adequate guards at the point of manufacture as soon as there is brought about some degree of harmony in existing regulations. Such an assertion demands that the greatest possible effort be made to bring about such a harmonious condition at the earliest possible moment.

To what extent are safety codes, either local or national, used by individual safety engineers in their daily work? I believe that I am safe in saying that there is not a general usage of such material by this group. There has been a tendency through a study of the accidents occurring in the individual plants for the safety engineer to develop his own group of safety standards, generally termed "company safety rules." In fact, I know of several cases where company rules have been developed which are opposed to the provisions of both State and national regulations. How much better would it be for the safety engineer, first, to obtain a complete set of the safety standards of the State in which he is located; second, to obtain copies of the national safety codes that have been developed; and third, to build upon this collection of standards the company rules that are to be carried out by every responsible officer in his plant. Such a constructive policy would enable the engineer to follow the experience of industry in general, so far as it has been crystallized, in properly planning the installation of safeguards and machines and in training the employees in the safe operation of the machines. Such a policy would permit the safety engineer to present to both the State and National committees preparing safety standards constructive suggestions based on the application of the standards to conditions in his own establishment. Such assistance in the development of practicable and enforceable standards will be greatly welcomed by both groups of committees.

Nineteenth Annual Safety Congress at Pittsburgh

WITH a total registration of more than 7,000 delegates, approximately 10 per cent of whom were women, the nineteenth annual congress of the National Safety Council convened at Pittsburgh during the week beginning September 29. A feature of the Congress was Pennsylvania day characterized by a program devoted to Pennsylvania accident problems and sponsored by the Western Pennsylvania Safety Council.

The address of the retiring president of the National Safety Council, Mr. C. E. Pettibone, of the American Mutual Liability Insurance Co., reviewed briefly the work of the council during the year, suggesting its accomplishments and some of its handicaps, pointing out that the matter of accident prevention is largely a problem of education and making the following pertinent observation:

> It is vital that we ask ourselves "Where are we going and how far can we go in this accident problem?" The 1929 death rate per 100,000 population was about 79.9. There were 97,000 deaths—10,000,000 people injured. The increase did not occur in industry or in the homes, and we know that in the school-age group fatalities decreased 11 per cent last year. We all know that the cause of our greatest concern in the accident problem is the motor vehicle. Thirty-one thousand deaths caused by this single type of instrument can not be accepted as a necessary part of our routine existence.
>
> What can we do about it? My answer is that we must forget that we are industrial men when we go to work on this job and recognize the universality of this outstanding appeal for the support and interest of all of our citizens. * * * The street and highway problem lacks the control we have in industry. We must first make the public understand the seriousness of the accident situation and then organize effective leadership.

At the opening meeting of the congress a resolution was adopted providing for the incorporation of the National Safety Council, and before the congress adjourned steps had been taken to incorporate under the laws of Illinois. A resolution adopted by the session of governmental officials called upon the executive committee of the council to establish a section devoted to safety and accident prevention problems confronting State and national labor officials. Another resolution adopted by the congress covered public safety, industrial safety, and education, and is as follows:

> Whereas accidental deaths in the United States are increasing at an alarming rate, taking a toll last year of 97,000 lives, with 31,000 motor-vehicle fatalities, 23,000 deaths from home accidents, 23,000 industrial fatalities, and more than 20,000 accidental deaths in public places other than streets and highways, and in addition to this carnage was added a total of 10,000,000 nonfatal disabling injuries because of accidents; and
>
> Whereas this shameful record is not equaled by any other civilized foreign country and stands as a terrific indictment against the social progress and civilization of these United States; and
>
> Whereas this reckless waste of human life and limb results in untold suffering, sorrow, and destitution and represents economic devastation amounting to $3,250,000,000; and
>
> Whereas American leadership for safety must have the full support and friendly cooperation of our national citizenry to stem the tide of killing and maiming: Therefore be it
>
> *Resolved*, That the members of the National Safety Council and all others present at the Nineteenth Annual Safety Congress do pledge themselves to increase individual and collective efforts to prevent accidents and do vigorously urge that continuation of council activities be extended as rapidly as possible and to be concentrated in the following channels:

1. *Public safety.*—A solution of the automobile-accident problem, at present the most alarming problem of safety; the elimination of unfit and reckless motor-vehicle operators, through the adoption of a drivers' license law by every State; uniform traffic laws for all States and cities; standard traffic signs and signals; standard accident-reporting systems; necessary street and highway improvements in the interests of safety; enforcement and observance of traffic laws; a recognition of the rights of others on the highway, whether pedestrians or drivers, based on the principle of the golden rule; the establishment of community safety councils in all American cities.

2. *Industrial safety.*—Regular and complete safety inspection and research in all industries, large and small, followed by prompt application of approved remedial measures; the safeguarding of all dangerous mechanical equipment and the constant use of such devices; the revision of hazardous manufacturing processes; continuous safety education throughout all industry; full cooperation with the National Safety Council and its affiliated community councils in carrying on industrial safety.

3. *Education.*—Let education be the keynote of the coming year, that the lessons and well-defined principles of safety be firmly implanted in every home and school throughout our Nation; let the youth of to-day be given opportunity for a full understanding and appreciation of the real meaning of safety in order that the citizens of to-morrow may enjoy the many blessings it bestows.

C. W. Bergquist, superintendent of public relations, Western Electric Co., Chicago, was elected president for the ensuing year, with other officers as follows:

Vice president for finance, J. I. Banash, consulting engineer, Chicago, Ill.
Vice president for engineering, George Sanford, General Electric Co., Schenectady, N. Y.
Vice president for industrial safety, C. L. Close, United States Steel Corporation, New York City.
Vice president for membership, George Opp, Detroit Edison Co., Detroit, Mich.
Vice president for administration, G. T. Hellmuth, Chicago, North Shore & Milwaukee R. R. Co., Chicago.
Vice president for councils, John Long, Delaware Hudson Co., Albany, N. Y.
Vice president for education, A. W. Whitney, National Bureau of Casualty and Surety Underwriters, New York City.
Vice president for health, C.-E. A. Winslow, Yale University, New Haven, Conn.
Vice president for public safety, Edward Dana, Boston Elevated Ry., Boston, Mass.
Secretary and managing director, William H. Cameron, National Safety Council, Chicago, Ill.
Treasurer, Harvey Ellerd, Armour & Co., Chicago, Ill.

HEALTH AND INDUSTRIAL HYGIENE

Proposed Outline of Industrial Medical Course for Medical Schools

THE question of more adequate training of physicians in the diagnosis and treatment of industrial diseases through the teaching of industrial medicine in medical schools and colleges as part of the general curriculum has been discussed by the International Association of Industrial Accident Boards and Commissions at its annual meetings for some years.

The quite general lack of knowledge of industrial poisons and diseases among physicians at large and their frequent failure, therefore, to associate the occupation of the patient with the disease for which he is seeking treatment has been a matter of frequent remark. In speaking upon the question of better preparation of medical students upon this phase of medicine at the fifteenth annual convention of the association in Paterson in 1928 Mr. Ethelbert Stewart, United States Commissioner of Labor Statistics, said: "I have never in my life had a doctor ask me what I did, what my job was; it may be that some doctors do ask a patient about his work, but the whole question of occupation as an element of disease seems to be ignored except by plant physicians or industrial physicians and the physicians attached to the various State departments, and I wonder if they reach one-half of 1 per cent of the people who are really working in these poisons." At that convention the members authorized Mr. Stewart, in his capacity as secretary of the organization, to circularize the principal medical schools and colleges, calling attention to the situation in regard to industrial medicine and occupational diseases and requesting that at least a minimum of class work along this line be included in their courses. Letters were accordingly sent in December, 1928, to 72 colleges, and they were requested to inform the secretary as to what action would likely result from this communication. Replies were received from 44 colleges. Of these, 4 stated that they now have a course in industrial hygiene or occupational diseases; in 8 the subject is included in history taking of patients; 4 said they would consider the matter; while 5 definitely stated they would enlarge their work along this line. A number stated that while there was no definite course on occupational diseases, the subject was included in courses on other topics in the way of lectures, examination of patients, visits to industrial plants, etc. Seventeen requested suggestions as to ways in which the subject could be introduced to their students.

As a result of this report the medical committee of the association was instructed at the 1929 convention to plan a course of study which would be suitable to present to the medical colleges for the purpose of familiarizing students with the problems of industrial medicine.

The following physicians who make up the membership of the committee are especially conversant with medical problems connected with workmen's compensation laws or with industrial medicine: G. H. Gehrmann, M. D., Wilmington, Del., chairman; C. W. Roberts,

M. D., Atlanta, Ga., vice chairman; Nelson M. Black, M. D., Wisconsin; Harley J. Gunderson, M. D., Minnesota; J. D. Hackett, M. D., New York, N. Y.; Emery R. Hayhurst, M. D., Columbus, Ohio; Robert H. Ivy, M. D., Philadelphia, Pa.; Maurice Kahn, M. D., California; Robert H. Kehoe, M. D., Cincinnati, Ohio; Henry H. Kessler, M. D., Trenton, N. J.; John J. Moorhead, M. D., New York, N. Y.; M. D. Morrison, M. D., Nova Scotia; Frank L. Rector, M. D., Chicago, Ill.; Ralph T. Richards, M. D., Utah; Henry Field Smyth, M. D., Philadelphia, Pa.; C. H. Watson, M. D., New York, N. Y.; Robert W. Wilcox, M. D., Long Beach, Calif.

The proposed plan was presented by Dr. G. H. Gehrmann at the 1930 convention held at Wilmington, Del. In presenting the report, Doctor Gehrmann stated that the committee realized that its task was a difficult one, as many others had endeavored to outline such a program and had met with varying degrees of success. One of the obstacles to the inclusion of a course in industrial hygiene is the fact that the average medical curriculum is already overcrowded, and there is not opportunity therefore for intensive instruction in industrial hygiene and medicine of the undergraduate student. Industrial medicine is, of course, a specialty and can be adequately studied only after graduation. The curriculum recommended by the committee is one which has been in effect in the University of Pennsylvania for a number of years and which covers both undergraduate and graduate students.

The following program proposed by the committee, therefore, is divided into two parts. The first part, it is considered, should be introduced into all medical colleges for the purpose of reaching the students who will become general medical practitioners, so that all such students upon leaving school may have at least some training in the occupational-disease problem. The second part is designed for a special intensive course of training in industrial medicine for post-graduate students. Included, also, as an aid to colleges inaugurating such a course is a bibliography dealing with medical industrial literature which is available at the present time and organizations in which industry would be interested.

Proposed Industrial Medical Courses in Medical Schools

PART 1.—*A suggestive outline for the teaching of industrial medicine in medical schools*

The course to cover one trimester consisting of one period a week; this to be included in the general curriculum and the purpose being to familiarize our medical students with industrial problems.

Discussions:

1. History, general development, statistics.
2. Personal factors: Age, sex, home, habits, nutrition, wages.
3. Welfare, sanitation.
4. Ventilation, light, temperature.
5. Hours, posture, tension, night work, fatigue.
6. Lead.
7. Mercury, arsenic, chrome, antimony, etc.
8. Coal-tar products, volatile solvents.
9. Gases, fumes, vapors.
10. Dusts.
11. Medical service.
12. Safety, fire.

Laboratory:

1. Dust, filter, Palmer, impinger: Three to four periods.
2. Ventilation: Fumes or smoke, anemometer, katathermometer, two to three periods.
3. CO: Two to three periods.
4. Light: One period.
5. Fumes: Two to three periods.

PART 2.—*Suggested outline of a department of industrial hygiene for post-graduate students*

This course to be three to six months of intensive training for those men who wish to go into industrial medicine as a specialty.

The department should cooperate with other university departments and be able to avail itself of their teaching facilities as follows:

1. Courses in practical hygiene, personal hygiene, preventive medicine and bacteriology.
2. Courses in sociology and statistics.
3. Courses in occupational disease, industrial surgery, and physiology.
4. Courses in heating, ventilating and lighting, water supplies, sewage and waste disposal.
5. Collaboration in chemical problems of research.
6. Nutrition and tuberculosis study.
7. Industrial dispensary.

Any or all of these courses should be available for special and advanced students and research workers.

Equipment: An adequate library of books and periodicals dealing with industrial hygiene and industrial medical subjects should be available, including special engineering and chemical journals, and some of the best of the industrial plant organs.

A liberal supply of museum exhibits, charts and lantern slides of industrial hygiene subjects and safety devices would be needed.

Contact with the National Safety Council, the National Conference Board of Physicians, and the National Association of Industrial Physicians and Surgeons should be provided for.

Courses to be offered:

To public-health students:

1. Practical hygiene laboratory work, as part of present course.
2. Industrial hygiene: 10 lectures first year; 15 field excursions and 15 seminar hours second year.

To industrial hygiene and industrial medicine students:

1. An intensive 2 months' course including lectures, laboratory work, and field surveys.
2. An intensive 2 months' course in industrial medicine given in the medical school.
3. Opportunity for 2 months' interneship in a factory medical department.
4. Opportunity for 2 or more months devoted to a special research problem.

To senior medical students:

1. A 10 weeks' elective course in industrial hygiene.

To factory physicians, hygienists, and safety men:

1. Special intensive work to meet individual needs, including opportunity to study or assist in the study of specific problems in their industry.

Special training offered to investigators for State departments of labor, city and State health departments, and the United States Public Health Service.

Special lectures, financed and arranged for, to be given by speakers of national reputation on industrial hygiene, medical or surgical subjects and safety work; these to be free public lectures well advertised in industry.

Staff of department:

Professor of industrial hygiene.

Assistant professor of industrial hygiene and two instructors (at least one with chemical engineering training) to be shared with other departments of school of hygiene.

Two research fellowships in industrial hygiene to study problems of chemical hazards, dustiness, sanitation, physiology, etc.

Services offered to outside agencies:

Group medical and hygiene service to special types of industries, as in the department-store service at Harvard University.

Consultation service to industrial firms.

Surveys of special hazards for city or State departments, the department to be affiliated with such departments.

The department to be officially represented at the following scientific meetings: National Safety Council; National Conference Board of Physicians; National Association of Industrial Physicians and Surgeons; American Public Health Association; American Medical Association.

The development of the foregoing program should be discussed by, and cooperated in by, a representative group of large-plant employers of labor in the district.

Industrial Hygiene—Current Literature and Organizations [1]

By E. R. Hayhurst, M. D.

I. General reference works

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[1] That is, literature and professional organizations devoted to the subject as a whole. There is a wealth of literature devoted to special problems or phases of the subject, such as fatigue, dusts, poisons, etc.

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National Industrial Conference Board (Inc.), New York, Industrial Relations Programs in Small Plants, 1929, 60 p.
—— Medical Care of Industrial Workers, 1926, 112 p.
—— Health Service in Industry, 1921, 60 p. (Report No. 34.)
—— The Physician in Industry, A Symposium, 1922, 98 p. (Special Report No. 22.)
Oliver, Sir Thomas, Health of the Worker, 1925, 266 p. (Faber and Gwayer, Ltd., London.)
—— Diseases of Occupation, 1916, 476 p. (Dutton.)
—— Occupations from the Social, Hygienic and Medical Points of View, 1916, 110 p. (Cambridge University Press.)
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Price, George M., The Modern Factory, 1914, 574 p. (Wiley.)
Rosenau, Milton J.,[2] Preventive Medicine and Hygiene, especially Ch. XIV, 5th ed., 1927, etc. (Appleton.)
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Bulletin of Hygiene, London Bureau of Hyg. & Trop. Med. (began 1926). Monthly.
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III. Bulletins and reports

U. S. Department of Labor, bulletins. (The earliest one reporting upon industrial hygiene is Bulletin No. 44, Jan., 1903; then No. 75, 1908, etc., to date.)
American Assn. for Labor Legislation, quarterly bulletins. (The first considering industrial hygiene in America appeared in 1910.)
International Labour Office, Geneva, International Labour Review, monthly since 1920.
Great Britain, Industrial Fatigue Research Board, bulletins, since 1918.
—— H. M. Inspector of Factories, annual and special reports, since 1900.
U. S. Bureau of Mines, bulletins, circulars, technical papers, beginning about 1912.
U. S. Public Health Service, public health bulletins. (First one on industrial hygiene is No. 71, August, 1915.)
—— Weekly reports (issued also as separate reprints). (The first one on industrial hygiene is May 29, 1914, Reprint No. 195.)

[2] Other general reference works on hygiene and public health, both American and foreign, may also be consulted.

National Safety Council, Proceedings of the annual congresses (from vol. 2, 1913, annually; also the first proceedings, 1912, contains an article on occupational diseases by Dr. John B. Andrews).

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V. Professional organizations of national scope [3] and dates of organization

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Conference Board of Physicians in Industry (limited to physicians of corporations composing the National Industrial Conference Board), 1914.
American Association of Industrial Physicians and Surgeons, 1916.
Section on Preventive and Industrial Medicine and Public Health, American Medical Association, 1922 (formed from previous Section on Hygiene and Preventive Medicine, 1915).

Cost of Hospital Service

THE question of reducing hospital expenses, which present such a burden to persons of moderate means, is discussed in an article [4] published in the September issue of The Modern Hospital.

According to recent estimates the annual national sickness bill amounts to $4,000,000,000. This figure does not include any of the indirect costs such as the erection and furnishing of hospital buildings, loss of earnings through sickness and premature death, etc., which have been estimated to amount to as much as $12,000,000,000. Taken together the total bill, not including capital expenditures, would amount to $16,000,000,000—a figure which indicates that the high cost of sickness is a serious social and economic problem. Only the very rich and the very poor are able to secure proper medical and hospital care without financial embarrassment to themselves, and for persons on a small income an illness involving hospital and physicians' fees often spells disaster. On the other hand, the writer states, the hospital's situation is equally desperate. Costs of operation of modern hospitals have increased greatly. For example, the average cash expenditure of the eight leading private hospitals in Cincinnati last year was $6.22 per patient per day, with a total average expenditure of $76.64 for each patient treated. The costs of eight leading hospitals in as many different cities were practically the same, while

[3] There are several active State societies such as those of New York, New Jersey, New England, etc.
[4] The Modern Hospital, September, 1930, pp. 87–90. Is it possible to reduce hospital expenses any further? by J. A. Diekmann.

the average daily cost per patient of all the private hospitals in Ohio amounted to $5.31, with an average for total treatment per patient of $63.82.

In reply to the statement which is frequently made in discussions of high hospital costs, that a good hotel room costs only $4 or $5 a day while a hospital charges $6 and $7, it is pointed out that the hospital charges cover many specialized services. The hotel services consist of cleaning the rooms and making the beds, which is done by comparatively low-paid workpeople, while in the hospital the patient's meals must be served in his room, he must be bathed, his temperature, pulse, and respiration carefully recorded, and many additional services provided for him. Much of the hospital service is rendered by highly educated and trained technicians, so that it is considered that if the hotel had to give its guests the same type of service the hospital gives its patients, it would have to charge from $15 to $20 a day.

According to a recent extensive hospital survey the expenses have increased an average of 135 per cent, while the hospital charges have increased only 66 per cent. In the eight Cincinnati hospitals already referred to there were 1.63 persons on the pay roll last year for each patient in bed. As the lowest pay, including maintenance, might be quoted at $55 a month, the one item of service expense for each patient based on the lowest pay would amount to $3.66 a day.

As a means toward reducing the costs of hospitalization for the poorer patient for whom these costs are prohibitive the writer advocates the construction of less costly and elaborate hospitals. The average room is built and furnished, it is said, at a cost of from $3,500 to $5,000 and its upkeep results in large expenditures for which the patient eventually must pay. Efficient service can be rendered in plainer and less expensive surroundings, and all showy, costly, and unproductive ornamentation should be eliminated, therefore, in the interest of the patient's purse. The superintendents of hospitals also have an opportunity to reduce costs by watching carefully the many ways in which wastefulness may occur.

One of the more important causes of high hospital costs is the custom of paying the student nurses a stipend. This custom is a relic of the time when the student nurse was little more than a hospital maid performing menial labor. Now practically all of the time during the first year is spent in study and the practical service of a student nurse is almost negligible. Her education is expensive to the hospital since full-time teachers are employed; and well-furnished classrooms, finely equipped laboratories, demonstration rooms, and libraries are provided. The student nurse also receives free room and board and free medical service when it is needed, and it is argued that as the service which she gives to the hospital during her training is an essential of that training, she should not receive pay for it which ultimately adds to the costs to the patient. Many hospitals, it is said, are eliminating this expense and are even charging tuition.

Finally, one of the more important among the different items which add materially to the costs of hospital care is the practice of making courtesy allowances. While it is conceded that hospitals, especially church institutions, should do as much free work for the poor as possible, as well as provide free service for nurses and internes, it is con-

sidered that there is no reason for giving large reductions on hospital bills to general employees of the hospital who are on a salary basis and are as well able to pay as are other employees of their class or to the physicians on the staff or others who treat patients at the hospital. Many hospitals, it is said, never present a bill to a physician and the costs of this free service, like others given by the hospital, must eventually be added to the bills of the patients in general—many of whom find it exceedingly difficult to pay their own bills. While in defense of this practice it has been argued that the physicians do much free work, including lecturing before the student classes and attending charity patients without charge and should, therefore, receive the courtesy of a large allowance when they are patients, it should be remembered that in the hospital they are provided free of charge with a costly equipment, and skilled nurse service for the performance of operations for which they receive high fees.

All of these obstacles to the provision of a more reasonably priced hospital service to the person of small or average means can not be removed by the individual hospital, which will neither have the courage nor can it afford to attack the problem alone, but the situation may be remedied, the writer believes, when all the hospitals unite in attacking the problem and agree upon the measures necessary to reduce the costs.

An Estimate of Adequate Provision for Organized Care of the Sick

AN ARTICLE by Dr. Haven Emerson in the September issue of The Modern Hospital discusses the provisions which could be considered adequate for taking care of the sickness needs of a given population aside from the care of the sick by the independent practitioner of medicine who treats patients at his private office or in their homes. Doctor Emerson states that although organized care of the sick by groups of practitioners employed by the community on a salary basis, for all kinds of medical service, may develop in the future, at the present time there is no basis upon which to estimate the adequate amount of such a service.

Under the present organization there are seven types of service provided for care of the sick by official or nonofficial agencies and supported by tax levies, endowments, and contributions. These are, in the order of their development: General and special hospitals for the care of bed patients; outpatient departments and clinics for the care of ambulatory patients; medical attendance of the sick at home by city or district physicians; home care of the sick by visiting or public health nurses; medical social service by hospital social workers; care of the chronic sick in special hospitals for such cases; and care of persons recovering from illness in convalescent homes and hospitals. So far there are no official standards that have hindered or limited the development of these services and the individual community has in general worked out its program for the humane care of the sick independently.

Based upon present practice the provisions which may be regarded as necessary for the care of the sick in urban communities of 50,000 or over are 5 beds per 1,000 of the population for acute general medical and surgical patients, maternity cases, and the newborn. This figure is based on an average length of hospital care of approximately 14 days per patient and an average use of the beds throughout the year to 80 per cent of their capacity, although in large industrial communities the number required may be as high as 9 beds per 1,000.

The following table shows the estimated needs for organized care of the sick in a city of 100,000 population. Of the 500 beds needed for general medical care, it is estimated that 50 should be available for children other than the newborn and 44 for maternity cases if experience shows that 50 per cent of the births of the community generally occur in hospitals and that the annual birthrate is 18 per 1,000.

Estimated needs for organized care of the sick in a city of 100,000 population

Type of care	Number of hospital beds
General medical, surgical, children, and maternity	500
Communicable diseases	50
Tuberculosis	80
Chronic sick	200
Convalescent patients	75
Mental	600
Total	1,505

The estimated number of beds needed for tuberculosis cases would vary with the prevalence of the disease in the community and there should be as many beds provided as there are annual deaths. In other words, if there was an average of 80 deaths from tuberculosis over a 5-year period in a population of 100,000, 80 beds would be needed.

For outpatient services it is estimated that the number of doctor hours per week should be 125 for each 100,000 of the population, including medical and dental service, of which 10 hours would be necessary for the care of tuberculosis, 19 for venereal disease, and 14 for heart disease. There would be 50 visiting nurses required and 12 medical social service workers.

At the present time, Doctor Emerson states, the provision of physicians by official or voluntary agencies to care for sick in their homes is rarely made and when it is provided is usually unsatisfactory, although an outstanding example of a good service of this kind is furnished in the home-visiting work of the physicians of the Boston Dispensary.

In using the term "adequate provision" for the sick it was the purpose of the writer to deal with the general quantitative provision of facilities and personnel of professional grades and not to consider the quality of diagnosis and treatment offered, which is another problem.

Provision for National Institute of Health

A NATIONAL Institute of Health was established by the enactment into law of the Ransdell bill at the last session of Congress. The law, which was approved by President Hoover May 26, 1930, provides that the nucleus of the new organization shall be the Hygienic Laboratory of the Public Health Service, and all the laws, authorizations, and appropriations pertaining to the Hygienic Laboratory will hereafter be applicable for the operation and maintenance of the National Institute of Health. A sum of $750,000 was appropriated for the construction and equipment of additional buildings adjacent to the present Hygienic Laboratory and the law also provides that the Secretary of the Treasury is authorized to accept on the behalf of the United States gifts made unconditionally by will or otherwise for study, investigation, and research in the fundamental problems of human diseases or for additional equipment or buildings, if such gifts are made unconditionally and their acceptance is recommended by the Surgeon General and National Advisory Health Council. The Surgeon General is authorized, with the approval of the Secretary of the Treasury, to establish and maintain fellowships from funds donated for that purpose; and individual scientists, other than commissioned officers of the Public Health Service, who are designated to receive such fellowships may be appointed for duty in the National Institute of Health. It is also provided that the facilities of the institute shall from time to time be made available to bona fide health authorities of States, counties, or municipalities or purposes of instruction and investigation.

Industrial Diseases and Poisoning in British Factories, 1929

THE report of the chief inspector of factories and workshops in Great Britain for the year 1929 contains the report of Dr. John C. Bridge, senior medical inspector of factories, showing the causes and extent of industrial diseases and poisoning among workers in British factories.

Several special inquiries were made by the medical inspectors during the year, particular attention being given to dust diseases, including silicosis in the sandstone industry and among granite workers, and a special report on asbestosis.[1] Lifting of heavy weights by women and young persons was also the subject of further study.

Table 1 shows the number of cases of disease resulting from the use of some of the more important industrial poisons for certain years from 1900 to 1929.

[1] See Labor Review, July, 1930, pp. 75, 76.

TABLE 1.—NUMBER OF CASES OF POISONING AND OF INDUSTRIAL DISEASES AMONG FACTORY WORKERS IN GREAT BRITAIN FOR SPECIFIED YEARS, 1900 TO 1929

Disease	1900	1910	1920	1926	1927	1928	1929
Lead poisoning:							
Cases	1,058	505	289	322	347	326	244
Deaths	38	38	44	46	35	43	31
Mercury poisoning:							
Cases	9	10	5	4	3	4	
Deaths		1		1	2		
Arsenic poisoning:							
Cases	22	7	3	5	3	2	
Deaths	3			3	1	1	
Carbon bisulphide poisoning: Cases				1		1	6
Aniline poisoning:							
Cases				33	38	41	26
Deaths				1	1		
Chronic benzene poisoning: Cases				1			1
Toxic jaundice:							
Cases			6	2	3	6	2
Deaths			3				1
Epitheliomatous ulceration:							
Cases			45	187	174	175	165
Deaths			1	49	49	59	50
Chrome ulceration: Cases			126	55	65	70	109
Anthrax:							
Cases	37	51	48	38	31	45	40
Deaths	7	9	11	3	2	8	5

Lead poisoning.—There was a decided decrease in the number of cases and deaths from lead poisoning reported in 1929 as compared with the previous year, there being 82 fewer cases and 12 fewer deaths. This decrease is attributed in such industries as the manufacture of storage batteries to the enforcement of strict hygienic and safety regulations and in the coach and car painting industry to the increasing use of leadless fillers and paint. However, cases of incipient lead poisoning were found among young women engaged in a perambulator factory in filling by hand and subsequent rubbing down of the paint. No special precautions had been taken in this instance, as the filler was said to be leadless, but analysis of the filler showed that it contained 27.2 per cent soluble lead. Although 75 cases were reported among male painters there were no cases attributed to spray painting.

Carbon bisulphide.—Several cases of poisoning from carbon bisulphide were found in an artificial silk mill due to the fact that carbon bisulphide vapors were allowed to escape into the room. In other factories, although no definite cases of poisoning were found, there were several cases in which there was indication of absorption of the poison and as a result periodic medical examination was instituted in all the plants. A case of acute mania without other symptoms occurred in the first factory shortly after the physical examinations had been instituted, but as no other cases occurred among men working throughout the same period it was considered that the man was probably peculiarly susceptible to the poison.

Aniline.—There were 15 fewer cases of aniline poisoning reported than in the previous year, and for the second year in succession there were no fatalities. However, a fatal case of cancer of the urinary bladder occurred in a man aged 51 who had been employed in a synthetic dye works using sodium naphthionate for 13 years, and then numerous substances including dinitrochlorbenzene, aniline, phenylglycine, and formaldehyde for 2 to 4 years. The growth had been successfully removed 14 years before, but a second primary growth

was the cause of death. The question of the liability of workers in the manufacture of synthetic dyes to cancer of the bladder has been under investigation for some time, but the research is being continued, as conclusive results have not yet been obtained.

Toxic jaundice.—One fatal case of toxic jaundice due to the inhalation of the vapor of tetrachlorethane occurred in a girl engaged in dipping pieces of celluloid into a solution containing 30 per cent tetrachlorethane. Death, which was due to hemorrhages from the mucous membranes, chiefly stomach and nose, occurred in less than three months from the time she was first employed. Another case of toxic jaundice occurred in a worker handling trinitrotoluol, but this was not serious and the worker recovered completely.

Epitheliomatous ulceration.—Because of the long period which elapses usually between contact with known carcinogenic substances and the appearance of the disease it is not always easy or possible to determine whether or not the disease can be ascribed properly to such contact. For this reason, the report states a few cases may be incorrectly reported while other cases are not reported until the returns of death from this cause are received. A slight decrease in the total number of cases reported is shown for the year 1929, being especially marked among the cases due to oil. This is thought to be the result of the detection and early treatment of these cases in previous years. For the years for which skin epithelioma among cotton mule spinners have been reported and up to the end of 1929 there are records in the factory department of 920 cases. The disease was recognized in 758, or 82.3 per cent, of the spinners while they were still employed. Thirty-six, or 3.9 per cent, of the spinners had retired before the disease was recognized, and in 126 cases, or 13.6 per cent, these workers had passed into other employment for 1 to 30 years. Among the 36 retired spinners the duration of employment ranged from 33 to 63 years, the length of retirement before the disease was recognized being from 1 to 16 years. A total of 50 deaths from epitheliomatous ulceration from various substances occurred during the year.

Anthrax.—Five fatalities from anthrax occurred out of a total of 40 cases reported. Of these, 16, with 2 deaths, were due to infection from wool; 3 were contracted from horsehair; 20, with 3 deaths, from hides and skins; and 1 case occurred in a heel polisher in a shoe factory, the cause being probably the tanned leather. In three of the five fatalities there was definite delay in obtaining treatment.

Dermatitis.—Reporting of cases of dermatitis is not compulsory, but a total of 834 cases were voluntarily reported for the year. These occurred chiefly in the following occupations: Engineers, chemical workers, dyers and calico printers, French polishers and stainers, rubber workers, platers, metal workers, bakers and confectioners, painters, cotton workers, and woodworkers. The prevention of dermatitis may be secured in a large number of instances, the report states, by close and daily attention to cleanliness, effected by non-irritating substances; prompt first-aid treatment of injuries; periodic inspection of hands and arms; use of a lanoline and vaseline ointment at night, and where work permits, before work; and the use of protective gloves.

Poisoning from gases and fumes.—The number of cases of poisoning from carbon monoxide was 113, with 10 deaths, an increase of 32 cases and 1 death over the previous year, the reason being due to cases which occurred at a large works where water gas is used. There were 25 cases, with 5 deaths, caused by blast-furnace gas; 55 cases, with 3 deaths, were due to producer gas; 21, with 1 death, to coal gas; and 12 cases, with 1 death, were due to various causes, such as coke rivet fires in confined spaces and exhaust fumes from motor-bus engines.

Table 2 shows the number of cases of poisoning from gases and fumes for the years 1925 to 1929:

TABLE 2.—NUMBER OF CASES OF INDUSTRIAL POISONING FROM GASES AND FUMES, 1925 TO 1929, BY YEARS

Gas or fumes	1925	1926	1927	1928	1929
Carbon monoxide:					
Cases	118	101	88	81	113
Deaths	10	6	4	9	10
Carbon dioxide:					
Cases	10	4	3	8	----
Deaths	2	----	----	1	----
Sulphuretted hydrogen:					
Cases	4	3	9	9	7
Deaths	----	----	----	3	2
Sulphur dioxide:					
Cases	3	2	5	10	6
Deaths	1	----	1	----	----
Chlorine, cases	12	13	14	17	14
Nitrous fumes:					
Cases	10	5	7	6	11
Deaths	2	1	----	1	2
Ammonia:					
Cases	5	5	5	12	18
Deaths	----	1	----	1	----
Benzol, benzine, naphtha and petrol:					
Cases	3	4	7	7	7
Deaths	1	1	2	2	----
Miscellaneous:					
Cases	35	17	23	17	36
Deaths	3	1	2	2	1

Provision for a School of Industrial Medicine at Rome

ACCORDING to an article in Il Lavoro Fascista, August 3, 1930, the Royal University of Rome by a unanimous vote of the faculty of medicine has decided to open a school of industrial medicine for graduates in medicine and surgery and to confer upon its graduates a diploma of specialist in industrial medicine. The course will be for two years; and the director will be the president of the medical faculty of the Royal University of Rome.

The school, with the approval of the university authorities and of the national minister of education, will open this fall. The course of study includes lessons on fundamental matters relating to industrial medicine and lectures by the clinical director of the medical faculty of the university and by eminent persons connected with other universities.

Sessions will be held, for the present, at the Labor Polyclinic of Rome, established by the Fascist Industrial Union of Latium, which has placed its facilities at the disposal of the new school.

WORKMEN'S COMPENSATION

Meeting of International Association of Industrial Accident Boards and Commissions in 1930

THE seventeenth annual convention of the International Association of Industrial Accident Boards and Commissions was held in Wilmington, Del., September 22 to 26, 1930. There was a registered attendance of 174 persons from 24 States, the District of Columbia, Porto Rico, and 3 Canadian Provinces.

In the opening address Dr. Walter O. Stack, president of the association and president of the Delaware Industrial Accident Board, reviewed the accomplishments of the association during the past year and the legislative changes in workmen's compensation during 1930. He pointed out that, in spite of constructive efforts by the various agencies to prevent industrial accidents, recent data based on man-hour exposure indicate an increase in fatalities and permanent injuries. The address included several recommendations, and urged that accurate statistics of accidents be compiled in each State and furnished to the United States Bureau of Labor Statistics as the first essential in the elimination of accidents.

Ethelbert Stewart, United States Commissioner of Labor Statistics, stated, in submitting his report as secretary-treasurer, that the Industrial Commission of North Carolina had been admitted as an active member since the last meeting and that two new associate members had been added to the list. He proposed that the association arrange for calling an all-American convention of workmen's compensation officials and announced that the Bureau of Labor Statistics has now in the hands of the printer a translation of all workmen's compensation laws of the Latin-American countries.

Dr. George H. Gehrmann, medical director of E. I. du Pont de Nemours & Co., Wilmington, Del., reported as chairman of the medical committee that a curriculum in industrial medicine, based on the course given at the University of Pennsylvania, has been prepared for submission to medical schools. The scope of the course was explained by Dr. Henry Field Smyth, professor of industrial hygiene, University of Pennsylvania, and considerable discussion followed.

During the evening United States Secretary of Labor James J. Davis, praised the gratifying results of workmen's compensation legislation in encouraging efforts toward accident prevention, and also the promotion of workmen's compensation by the association. Ethelbert Stewart, United States Commissioner of Labor Statistics, gave a brief history of the growth of the association and its activity in protection of the worker.

Tuesday's sessions were devoted to the legal phases of workmen's compensation, with Fred W. Armstrong, vice chairman of the Workmen's Compensation Board of Nova Scotia, and Wellington T.

Leonard, chairman of the Industrial Commission of Ohio, in the chair. Considerable discussion followed the statement by Matt H. Allen, chairman of the Industrial Commission of North Carolina, that the industrial commission of North Carolina functions as a court, with powers to penalize witnesses for refusals to testify.

The sessions on Wednesday dealt essentially with safety, and were presided over by R. B. Morley, general manager of the Industrial Accident Prevention Associations of Ontario, and John Roach, Deputy Commissioner of Labor of New Jersey. One of the papers submitted, The Cost of Industrial Accidents to the State, the Employer, and the Man, by H. W. Heinrich, of the Travelers Insurance Co., is reproduced elsewhere in this issue.

At the Thursday sessions, both devoted to medical problems, the chair was occupied by Dr. Russell Kessell, of the Workmen's Compensation Department of West Virginia, and Dr. George H. Gehrmann, medical director of E. I. du Pont de Nemours & Co., Wilmington, Del. In one of the papers presented, Maj. Gen. H. L. Gilchrist, chief of the Chemical Warfare Service, United States Army, pointed out that the effects of injury from chemical gases has been greatly exaggerated in the past and that the great majority of cases are curable.

At the closing session, Friday morning, the association created a standing committee of five members on rehabilitation, and a similar committee on workmen's compensation legislation. The latter committee was instructed to report at the next regular meeting on:

1. A legislative plan for adoption by the States to secure the full and just protection of the rights of all parties where employees are injured in so-called extraterritorial service.
2. Recommendation of a uniform statutory provision to be by law construed as a part of every workman's compensation insurance policy to protect employees against any miscarriage of benefit protection.
3. The proposal of a plan for a uniform statutory provision covering the subject of third-party liability.

The program committee was requested to consider discussion at the next meeting of the French system of measuring permanent disabilities.

The secretary was instructed to "ascertain the best methods and the most convenient time for calling a convention on all-American workmen's compensation law administration, preferably in Rio de Janeiro, Brazil; Mexico City, Mexico; Washington, D. C.; or Toronto, Ontario."

The association went on record as accepting Bulletin No. 511 of the Bureau of Labor Statistics as the official proceedings of the last meeting, and indorsing the program of observance of the two-hundredth anniversary of the birth of George Washington, to take place in 1932.

The following officers were elected for the ensuing year:

President, Parke P. Deans, industrial commissioner of Virginia.
Vice president, Sam Laughlin, industrial accident commissioner of Oregon.
Secretary-treasurer, Ethelbert Stewart, United States Commissioner of Labor Statistics, Washington, D. C.
Executive committee, Parke P. Deans, Virginia; Sam Laughlin, Oregon; Ethelbert Stewart, Washington, D. C.; Walter O. Stack, Delaware; Frances Perkins, New York; Wellington T. Leonard, Ohio; W. H. Horner, Pennsylvania; O. F. McShane, Utah; and Robert Taschereau, Quebec.

The 1931 meeting will be held in Richmond, Va.

The complete proceedings of the seventeenth annual convention will be published later in bulletin form by the United States Bureau of Labor Statistics.

New Workmen's Compensation Law of Nicaragua

EMPLOYERS in Nicaragua are liable for industrial accidents and occupational diseases suffered by their workers, according to the terms of the new workmen's compensation law which was signed by President Moncada on May 13, 1930, and was to go into effect three months after its promulgation.

Employments Covered

THE compensation law covers mining and quarry operations; enterprises engaged in the construction, repair, and maintenance of buildings, canals, lighthouses, aqueducts, sewers, etc.; the production of gas and electricity; establishments manufacturing or using explosives, inflammables, or unhealthful or poisonous substances, etc.; the construction, repair, and operation of railroads and street railways, highways, etc.; the production of forestry products; the operation of theaters and public performances; and apprentices; also crews on ships of Nicaraguan registry, federal munitions factories, and federal and municipal industrial establishments and public works.

Injuries Covered

AN industrial accident is defined as any bodily injury which a worker sustains in the course of or arising out of work performed for another. To be compensable an occupational disease must be declared to have originated exclusively in the kind of work performed by the worker during the year preceding the disability.

Injuries are not compensable when they have been caused intentionally by the worker or by a third party or when they are due to force majeure not connected with the nature of the work.

Compensation Benefits

THE compensation scale is based upon the earnings of the injured worker during the year preceding the accident up to a maximum of 1,200 cordobas.[1]

Death.—If the accident caused the worker's death, the employer is required to pay the funeral expenses, which may not exceed 30 cordobas, and in addition to pay to the family of the deceased an amount equal to one-half of the salary he received during the time of his employment, such compensation to be not less than the amount earned by him in six months, nor over 1,500 cordobas. The family shall include the surviving spouse and the legitimate, legitimated, or recognized illegitimate minor children of the deceased. Grandchildren and brothers and sisters of the deceased until they are 16 years of age, as well as the ascendants, are included if on the day of the

[1] 1 cordoba at par=$1.

accident they were living under the roof of and were supported by the deceased.

Permanent total disability.—A worker who is permanently and totally disabled as the result of an industrial accident or occupational disease receives compensation equivalent to that provided for in the case of death.

Permanent partial disability.—Employees suffering permanent partial disability shall receive 1,000 times the daily reduction in their wages as a result of their decreased efficiency due to the accident.

Temporary disability.—Temporary disability caused by the accident entitles the worker to compensation equivalent to one-half the average daily wage from the date of the accident until the day on which the injured worker is in a condition to return to work.

Increased compensation.—If it is proved that the accident was due to inexcusable negligence on the part of the employer or his superintendents, the compensation shall be increased by a sum up to as much as 50 per cent of the ordinary compensation payable in conformity with the law; if the accident occurs in an establishment lacking the safety devices required by the law the compensation is also increased 50 per cent.

Medical and pharmaceutical attention.—In addition to the compensation benefits described herein, employers are required to furnish medical and pharmaceutical attention for workers.

Insurance

As SOON as insurance companies handling insurance covering such risks have been established in Nicaragua, employers will be required to have their employees insured against injury from accident.

Time for Claim

A CLAIM for compensation must be made within one year after the date of the accident.

SOCIAL INSURANCE

Old-Age Pensions, Disability Benefits, and Life Insurance for Electrical Workers

THE International Brotherhood of Electrical Workers' Union is making rapid progress in providing old-age pensions, disability benefits, and life insurance for its members through agreements with employers' associations in the electrical-construction industry. The Labor Review for February, 1930 (p. 10), made note of two such agreements, one in St. Louis and the other in New York City. Recently similar agreements have been made by the local unions of electrical workers in Baltimore, Chicago, Cleveland, Denver, Kansas City (Mo.), Pittsburgh (Pa.), Tulsa (Okla.), and San Antonio (Tex.).

The plan of the insurance agreements of the electrical workers' union is a departure from the usual employer form of group insurance, which only protects the worker so long as he remains in the employ of the one company or firm. Under the terms of the electrical workers' insurance agreement the members of the local unions do not lose their benefits when changing from one employer to another under the jurisdiction of their local union. The plan was adopted only after long and careful investigation and study of the problem, and the cost of the insurance arrived at on a basis of permanency.

The agreement of Electrical Workers' Union No. 1, of St. Louis, Mo., with the Electrical Protective Association (Inc.), made July 15, 1929, provides that each employee of members of the association shall be furnished with life and annuity insurance in the sum of $3,000, a monthly pension of $40 for those of the age of 65 years or more, and $40 monthly for those totally disabled before reaching the age of 65 years, the monthly disability payments to be deducted from the amount payable at death. The premium for the life and annuity insurance in this agreement is paid by the employers. Each employer is to pay weekly to the Electrical Protective Association a sum equivalent to 35 cents per hour for each hour that each and every journeyman, foreman, and general foreman works for him, and 25 cents per hour for each hour that any and all classes of apprentices work for him, and is to furnish the association a certificate of the number and class of employees and the number of hours worked.

The agreement of Local Union No. 3 of electrical workers with the Electrical Contractors' Association of New York contains the following provisions:

> A board of insurance trustees, to be known as the Board of Insurance Trustees of the Electrical Industry of New York, is hereby created to handle and administer with full power a permanent fund to be established and maintained by the employers in cooperation with Local Union No. 3, for the purpose of providing group life insurance, old-age pensions, total disability and other benefits for the members of Local Union No. 3.
>
> Beginning November 1, 1929, and to continue each year thereafter, the employer shall pay to the Board of Insurance Trustees the sum of 20 cents for each

hour worked by each one in his employ, working in Greater New York and Long Island, on a union card issued by Local No. 3.

The intent is to create and to maintain from such payments at all times a reserve fund large enough to pay one full year's premiums to the insurance company. After this amount of reserve has been created, and while maintained the Board of Insurance Trustees shall proportionately reduce the amounts to be paid by the employers.

The benefits provided by the New York agreement are life insurance in the sum of $3,000, a $40 monthly pension for those of the age of 65 years or more, and $30 monthly for those totally disabled before reaching the age of 65 years, these disability payments to be deducted from the amount payable at death.

The agreement of Electrical Workers' Local No. 124 with the Electrical Protective Association of Kansas City, Mo., provides for the same benefits contained in the agreement of Local No. 3 of New York City, and for like contributions by the employers to the insurance fund. The contributions began March 1, 1930, and the benefits became effective September 1, 1930.

The agreement of Local Union No. 5, Pittsburgh, Pa., with the employers provides for the same benefits as provided for in the agreement of Local No. 3 of New York City. The contribution of the employer of 20 cents per hour for each hour worked by each employee began August 1, 1930. The insurance will become effective as soon as the board of insurance trustees finds it financially possible.

The agreement of Local Union No. 134 with the Electrical Contractors' Association of Chicago provides the members with life insurance in the sum of $5,000 and $65 per month for members disabled in the line of duty before reaching the age of 65 years.

The insurance agreements of the electrical workers' local unions in Baltimore, Cleveland, Denver, Tulsa, Okla., and San Antonio, Tex., have not been received by the bureau, but it is reported that they follow the general plan of the New York City agreement.

Widows', Orphans', and Old-Age Contributory Pensions in England and Wales, 1929–30

THE eleventh annual report of the English Ministry of Health, covering the year 1929–30, gives some data relating to the number of pensions paid under the contributory pensions acts, the number of beneficiaries, and the amounts paid. During the year ending March 31, 1930, claims were received for 67,526 widows' and 1,448 orphans' pensions, and pensions were awarded in the case of 58,739 widows and 1,268 orphans. At the close of the year 187,207 widows, 129,309 half orphans, and 5,487 orphans were receiving pensions.

Claims from persons between 65 and 70 for the contributory old-age pension were received to the number of 198,762, and 166,144 such pensions were awarded. The total number of claims for this pension from the coming into effect of the scheme in January, 1926, to March 31, 1930, was 941,445; of these, 691,492 had been awarded, 170,500 had been disallowed, and the remainder were under advisement, had been withdrawn, or were otherwise disposed of.

The amounts paid out in pensions under the contributory acts during the year are shown in the following table:

PAYMENTS UNDER CONTRIBUTORY PENSION ACTS, 1929-30

[Conversions on basis of pound = $4.8665]

Class of pension	England		Wales		Total	
	English currency	United States currency	English currency	United States currency	English currency	United States currency
Widows' pensions:						
Noncontributory	£2,699,500	$13,137,117	£243,000	$1,182,560	£2,942,500	$14,319,676
Contributory	5,735,500	27,911,811	436,000	2,121,794	6,171,500	30,033,605
Orphans' pensions:						
Noncontributory	148,500	722,675	16,000	77,864	164,500	800,539
Contributory	96,500	469,617	9,500	46,232	106,000	515,849
Old-age pensions (65 to 70 years)	12,430,000	60,490,595	798,500	3,885,900	13,228,500	64,376,495
Total	21,110,000	102,731,815	1,503,000	7,314,350	22,613,000	110,046,164

The total for the preceding year was £20,313,044 ($98,853,429), and the total amount paid in pensions from the coming into effect of the acts in January, 1926, to March 31, 1930, was £59,933,050 ($291,664,188).

Friendly Societies in Victoria

THE fifty-second annual report on friendly societies by the Government statist of Victoria discusses the question of Government securities as investments for such organizations. In 1910, in accordance with an act passed that year, the Victorian Government issued a special stock with interest at 4 per cent, to be sold only to friendly societies, thus providing them with a safe investment at a rate of interest about one-half of 1 per cent higher than that prevailing at that time on Government securities. Investment was optional, but the stock, once purchased, would be redeemed only upon the occurrence of certain events, such as the dissolution of the society or the need of money for certain specified purposes. Any outstanding stock, however, might be redeemed after May 31, 1931, whenever Parliament should provide funds for the purpose.

At the close of the fiscal year 1911–12, the first full year after the issuance of the stock, the friendly societies had invested in it to the amount of £278,730 ($1,356,440); thereafter the amount invested rose steadily until in the year ending June 30, 1917, it reached £374,554 ($1,822,767), after which it began to fall, and at June 30, 1929, it stood at £247,757 ($1,205,709). The decrease was owing to the changed circumstances brought about by the war.

At the time of the creation of the stock it was of great advantage to friendly societies, as it enabled them to obtain a Government investment which yielded a rate of interest approximately one-half of 1 per cent in excess of the rate then payable on ordinary Government securities. Soon after the commencement of the war there was a marked increase in the last-mentioned rate. For many years past it has exceeded 5 per cent, and at the date of this report it is about 6 per cent. It will thus be seen that, owing to circumstances which could not have been foreseen, the stock ceased to have a special attraction for friendly societies a few years after its creation.

It was considered doubtful whether or not the Government would be asked to provide a fresh issue of stock to take the place of the outstanding issue, which would probably be retired as soon as the legal date, May 31, 1931, should arrive. On June 30, 1929, the total amount of the sick and funeral funds held by the societies was £4,109,149 ($19,997,174), of which 4 per cent was invested in the special stock, 59 per cent in mortgages, 10 per cent in bonds, 15 per cent in commonwealth loans, 9 per cent was in banks, drawing interest, 2 per cent in real estate, and 1 per cent was not bearing interest. The average rate of interest earned during the year was 5.54 per cent.

Fifty-seven societies had an exclusively male, and 10 societies an exclusively female, membership. Figures for each of the three years June 30, 1926, to June 30, 1929, show the following gains:

STATISTICS OF FRIENDLY SOCIEITES, 1926–27 to 1928–29

Year	Membership	Revenue		Expenditure		Funds	
		English currency	U. S. currency	English currency	U. S. currency	English currency	U. S. currency
1926–27	160,411	£907,025	$4,414,037	£673,453	$3,277,359	£4,513,972	$21,967,245
1927–28	161,850	951,700	4,631,448	707,289	3,442,918	4,758,383	23,156,671
1928–29	164,307	1,051,104	5,115,198	875,467	4,260,460	4,934,020	24,011,408

During the year the male societies showed an increase in both the number of members drawing sick benefit and the duration of the illness for which benefit was claimed.

During the year 1928–29, 31,373 male members of ordinary friendly societies received sick pay, which number exceeded by 4,066 the corresponding number for the year 1927–28. The aggregate duration of sickness was 315,499 weeks, an increase of 24,916 weeks, and of 43,499 weeks, respectively, as compared with the numbers of weeks in 1927–28 and 1926–27. The duration of sickness in 1928–29 was equivalent to 14.5 days per effective member. This rate exceeded the rates for the years 1927–28 and 1926–27 by 1 and 1.6 days, respectively.

COURT DECISIONS

Workmen's Compensation Law Held Applicable in City Ordinance Violation

THE Supreme Court of Tennessee recently affirmed a judgment of a lower court holding that the State workmen's compensation law was not dependent upon municipal regulations. (Walsh *v.* Myer Hotel Co., 30 S. W. (2d) 225.)

From the facts in the case it appears that the Myer Hotel Co. of Nashville, Tenn., employed a boy 17 years of age as an operator of a passenger elevator, and he was killed while engaged in the performance of his duties. The administrator brought a common-law action for damages against the Myer Hotel Co. As a defense the hotel company claimed that its liability was controlled and limited by the provisions of the workmen's compensation law of Tennessee (acts of 1919, c. 123). The county circuit court dismissed the suit and an appeal was taken to the State supreme court.

At the time of the accident there was in force in the city of Nashville an ordinance of the city government providing that "no person under the age of 18 years shall operate, control, manage or be in charge of any elevator. No person, firm or corporation shall employ a person under the age of 18 years to operate, control, manage or have charge of any passenger elevator in the city of Nashville." It was contended by the administrator that the effect of this ordinance was to render unlawful the contract of employment and that the workmen's compensation law for that reason, had no effect upon the respective rights and liabilities of the parties and also that the relationship of employee and employer did not exist under the workmen's compensation law, and therefore an action for damages on account of the employer's negligence was proper.

The supreme court, after reviewing a number of cases interpretive of the Tennessee workmen's compensation act, said that:

> Inasmuch as the compensation act contains no language expressly excluding from its operation contracts which are unlawful because of the incapacity of one of the parties thereto, the exclusion of such contracts by judicial construction must result from a determination that such exclusion is in accord with the legislative intent.
>
> The language of this court in Manning *v.* American Clothing Co. and in Western Union Telegraph Co. *v.* Ausbrooks, cited above, that "The employment contemplated by the provisions of the workmen's compensation acts is a lawful employment," etc., was used with reference to contracts in violation of a State law regulating the employment of minors; and we think the sound reason for the holding in those cases is, as stated by the New Jersey court in the case above cited, that "it would be entirely unreasonable to attribute to the legislature the intention of adding terms to a contract of hiring which it had already prohibited the parties thereto from making."

The reason of exclusion, the court continued—

> Must fail when the illegality of the contract of employment arises solely from a violation of a municipal ordinance regulating the employment of minors within

the restricted area of a municipality. It can not be presumed that the legislature intended to exclude from the operation of the compensation statute a contract rendered unlawful because of some local municipal ordinance, which may not have been in existence at the date the compensation law was enacted, and of the terms and provisions of which the legislature could not have been advised.

The compensation law was enacted as a general statute of uniform application throughout the State. The exclusion from its application of contracts prohibited locally by municipal ordinance would destroy this uniformity; and, in the absence of an express provision to that effect, we can not assume that the legislature intended to place the local application of the statute within the regulatory discretion of municipal governments.

The compensation statute does not expressly exclude from its application contracts of employment otherwise included, because contrary to the ordinances of a municipality in which the contract is made or performed, and we hold that such exclusion is not clearly nor necessarily implied.

The judgment of the circuit court was therefore affirmed.

COOPERATION

Seventh Congress of Cooperative League of the U. S. A.

THE seventh biennial congress of the Cooperative League of the U. S. A. was held at Superior, Wis., October 20–22, 1930. This congress was remarkable for presenting by far the greatest unity and the most constructive action evidenced in any of the cooperative congresses yet held.

The Cooperative Union of Canada and the Manitoba Wheat Pool and Cooperative Marketing Board each sent a fraternal delegate to the congress, while greetings were received from the International Cooperative Alliance and the central cooperative bodies of Argentina, Austria, Bulgaria, Czechoslovakia, Denmark, Estonia, Finland, France, Germany, Great Britain, Japan, Latvia, Norway, and Switzerland, and from a number of American societies which were unable to send delegates to the congress.

In his opening address, Dr. J. P. Warbasse, president of the league, referred to the unsatisfactory conditions prevailing to-day, which have brought unemployment and suffering in their train, and the general feeling of uncertainty as to the future which prevails both here and in Europe. Such a situation offers the cooperative movement its opportunity to organize the people to better their lot by supplying their own needs and performing the necessary services. The movement must, however, take stock of itself, he said, to determine its own efficiency; in so doing it may profitably learn some lessons from its competitors, the chain stores, such as the carrying of small stocks of goods, quick turnover, and low overhead expense. As long as the cooperative movement must meet competition from this source, it must adopt the same methods and play the game in the same way. The cooperative society has, however, the advantage that it is owned by the people who are members of it and it is they who enjoy the difference between the cost and the selling price. In Doctor Warbasse's opinion, the cooperative movement has passed through the stage of dreams and theories. Cooperators know what the aims of the movement are and the principles on which it stands, and are agreed upon them. They can now enter the stage of action—that of making cooperative institutions succeed.

Development of the League

THE REPORTS of the general secretary and of the secretaries of the district leagues showed the general cooperative development and the work done in the various sections. In the opinion of the general secretary, the Cooperative League is better united and in a better position for effective work than ever before.

At the end of 1929 there were in affiliation with the league 129 societies, of which 79 were in the Northern States League district,

14 in the Central States League district, 25 in the Eastern States League district, and 11, not being in a locality covered by a district league, were directly affiliated.

Cooperative Press

Mr. L. S. HERRON, editor of the Nebraska Union Farmer, presented some of the problems confronting the editor of a cooperative publication. He pointed out that this work should be the exclusive duty of some one person, and emphasized the value of the cooperative paper in furthering the aims of cooperation and in acquainting the membership with the problems, developments, and happenings in the movement. In corroborating Mr. Herron's statement as to the value of the cooperative paper, Mr. C. McCarthy, manager of the Farmers Union State Exchange, a wholesale organization, said that the Nebraska Union Farmer is by all odds the greatest assistance the wholesale has in its work.

Cooperative Wholesaling

THE day when a national wholesale organization can be established in this country is not yet at hand, in the opinion of Mr. Cedric Long, executive secretary of the Cooperative League, who presented the report on cooperative wholesaling. The societies are too scattered and the distances too great. There are very few commodities that the existing regional wholesales can buy jointly, because of these same reasons. He was of the opinion, however, that the wholesale societies can adopt a uniform cooperative label to be used in all sections of the country, can help each other by the exchange of experience and opinions, and might even eventually maintain their own testing laboratory, instead of each employing a different private laboratory for this purpose.

Employees in the Cooperative Movement

AMONG the subjects discussed by the league were those of the education and training of cooperative employees, and the organization of such employees into labor unions.

Cooperative education of employees.—The societies of the Northern States League were the first to recognize the importance of training the employees of the cooperative movement. Ten years ago the Cooperative Central Exchange began such training with a short course in cooperative principles and in bookkeeping. Since that time it has held nine other courses, both the period of training and the subjects covered being considerably enlarged. Its tenth such course, an 8 weeks' course now being held, includes 150 hours' study of bookkeeping, 30 hours on the principles, theory, practice, and history of cooperation, 15 hours on the labor movement, 20 hours on commercial arithmetic, 12 hours on business correspondence, 15 hours on administration and organization of cooperative stores, 30 hours on management of cooperative stores, and 20 hours on learning how to judge merchandise. Only 30 students are accepted. These must be 18 years of age or over, and preference is given to applicants with some practical experience in the cooperative and labor movements.

Five training courses have been given by the Northern States Cooperative League, but whereas the Cooperative Central Exchange members are practically all cooperative stores, those of the league are engaged in a number of totally different lines of business, a factor which makes difficult the giving of a course applicable to all. The Eastern States League, which has given one training course, is confronted with practically the same difficulty, an additional handicap being the diversity of nationalities among the cooperative membership of the constituent societies.

Altogether, these three bodies have held 16 courses, at which 463 students were trained. Mr. George Halonen, educational director of the Cooperative Central Exchange, stated that 80 per cent of the employees in the cooperative stores in the Northern States district have been students in the exchange school.

The delegates at the congress were of the opinion that the matter of cooperative education is of prime importance to the movement. Doctor Warbasse warned that the fate of the cooperative movement depends very largely on the training of the cooperative employees.

Mr. A. J. Hayes, of Superior, Wis., pointed out also the need for a manual of cooperative A B C's for employees, covering the cooperative principles and certain business problems.

The national league has, for several years, maintained a correspondence course, but this has had no great success as yet. The delegates were of the opinion that the taking of the correspondence course might be made a prerequisite of the general training course, and the greater publicity should be given to the correspondence course among the local societies.

Organization of cooperative employees.—The discussion of the question of organization of cooperative employees was precipitated by a communication from a group of employees of cooperative stores in the Mesabe Range district of Minnesota, who had taken the preliminary steps toward the formation of an industrial union of cooperative employees and desired the indorsement of the congress. The delegates, however, took the position that such an indorsement would constitute the indorsement of dual unionism, since unions already exist in the respective trades.

The attitude of the congress, expressed in a resolution, was that while the cooperative movement welcomes any efforts to organize the employees for their protection and advancement, these must be on a basis which will at the same time further the interests of the cooperative movement itself.

Other Subjects

Among the other subjects discussed by the congress were the extension of the cooperative movement through planned promotion work, the work of a field organizer cooperator among the farmers of Indiana and Nebraska, the farmers and the Federal Farm Board, the League Yearbook, and the basis of payment of dues to the league.

Action Taken by the Congress

The holding of a general "cooperative month" each year was authorized by the congress, this period to be used in a membership

campaign, and a concerted attempt by the societies of each locality to acquaint the public with the aims and principles of cooperation. October was selected as being the most favorable month for the campaign.

The subject of cooperative insurance has engaged the attention of the past three congresses and a committee has been studying the question. The present congress continued the indorsement of the New Era Life Association and of the Workmen's Furniture Fire Insurance Association as the official insurance societies of the consumers' cooperative movement, writing life insurance and fire insurance on furniture, respectively. The congress also authorized the officers of the league to take steps for the formation of a brokerage agency to handle the writing of casualty insurance and fire insurance other than on furniture.

Other resolutions urged that all possible efforts be made to extend the cooperative women's guild movement which has already made considerable headway in the Northern States district, and that during the next two years a persistent attempt be made to extend the cooperative movement to new areas and new groups.

Status of Building and Loan Associations, 1929

THE table below, taken from the annual report of the secretary of the United States Building and Loan League to the thirty-eighth annual meeting of the league held in July, 1929, shows, by States, the development of these associations in 1929.

CONDITION OF BUILDING AND LOAN ASSOCIATIONS, 1929, BY STATES

State	Number of associations	Members	Total assets	Mortgage loans outstanding
Alabama	40	42,500	$30,271,200	$25,634,807
Arizona	8	6,700	4,414,866	3,968,295
Arkansas	71	75,271	43,601,366	37,965,108
California	222	437,584	477,226,116	416,802,996
Colorado	69	117,023	54,017,612	45,117,257
Connecticut	44	32,808	24,730,822	22,752,873
Delaware	44	19,500	14,031,047	12,062,400
District of Columbia	24	72,043	68,409,716	65,163,001
Florida	69	16,500	21,658,451	17,074,400
Georgia	36	15,083	5,149,446	4,457,486
Idaho	14	6,900	4,474,998	4,001,215
Illinois	927	918,000	448,423,317	415,190,738
Indiana	402	450,373	312,330,284	282,837,023
Iowa	74	64,421	49,045,649	45,081,130
Kansas	155	211,938	132,186,748	107,956,918
Kentucky	158	170,500	110,805,706	108,611,540
Louisiana	106	204,496	190,561,316	173,887,938
Maine	36	29,000	23,508,352	22,048,158
Maryland [1]	1,200	330,000	215,000,000	[2]
Massachusetts	227	519,198	543,654,998	502,637,271
Michigan	69	212,572	161,105,257	147,942,994
Minnesota	79	92,554	39,422,419	33,234,090
Mississippi	43	29,500	19,862,916	17,891,290
Missouri	237	265,774	198,852,368	178,416,924
Montana	27	43,728	20,367,830	18,281,801
Nebraska	83	252,638	163,460,364	139,870,118
Nevada	4	1,360	819,670	745,974
New Hampshire	29	17,208	12,726,849	12,196,619
New Jersey	1,562	1,200,000	1,151,503,097	1,062,722,473
New Mexico	19	5,047	4,805,512	4,064,291
New York	309	593,098	422,141,280	380,170,540

[1] Estimated

[2] No data.

CONDITION OF BUILDING AND LOAN ASSOCIATIONS, 1929, BY STATES—Continued

State	Number of associations	Members	Total assets	Mortgage loans outstanding
North Carolina	233	105,058	$95,848,057	$88,585,047
North Dakota	20	19,600	10,952,539	10,384,000
Ohio	810	2,388,625	1,283,665,876	1,146,545,352
Oklahoma	91	265,679	139,808,782	127,719,842
Oregon	39	51,000	28,320,667	22,538,321
Pennsylvania	3,901	1,650,000	1,400,000,000	1,200,000,000
Rhode Island	8	42,021	27,827,463	25,915,049
South Carolina [1]	151	33,000	26,500,000	[3]
South Dakota	23	10,880	5,439,587	4,793,245
Tennessee	38	21,300	15,532,832	[3]
Texas	176	187,880	137,015,904	122,886,727
Utah	24	126,536	51,680,143	42,716,239
Vermont	14	5,940	4,066,425	3,883,293
Virginia	91	65,000	58,878,642	52,837,266
Washington	73	293,816	105,316,958	83,864,584
West Virginia	63	67,300	41,827,485	36,954,310
Wisconsin	187	303,407	282,781,402	269,287,737
Wyoming	13	20,750	11,121,886	9,405,286
Other States				230,301,417
Total	12,342	12,111,209	8,695,154,220	7,787,405,383

[1] Estimated. [3] Included in "Other States."

Condition of Labor Banks as of June 30, 1930

ON June 30, 1930, there were 14 banks operating under labor-union auspices. These banks had combined deposits of $59,817,392 and total resources amounting to $68,953,855. The details for the individual banks are shown in the following table, supplied by the industrial relations section of Princeton University:

TABLE 1.—CONDITION OF LABOR BANKS AS OF JUNE 30, 1930

Name and location of bank	Share capital	Surplus and undivided profits	Deposits	Total resources
Federation Bank & Trust Co., New York, N. Y.	$750,000	$1,189,653	$18,130,880	$20,558,834
Amalgamated Bank of New York, New York, N. Y.	650,000	519,974	11,349,764	12,845,579
Telegraphers' National Bank, St. Louis, Mo.	500,000	210,573	6,659,455	7,701,328
Labor National Bank, Paterson, N. J.	300,000	224,453	6,021,853	6,681,691
Mount Vernon Savings Bank, Washington, D. C.	400,000	183,547	4,112,415	4,735,829
Union National Bank, Newark, N. J.	375,000	230,022	3,674,030	4,325,401
Labor National Bank, Jersey City, N. J.	400,000	191,925	2,676,150	3,369,174
Amalgamated Trust & Savings Bank, Chicago, Ill.	200,000	159,277	2,526,560	3,033,182
The American Bank, Toledo, Ohio	200,000	82,423	1,714,226	2,138,036
Farmers' & Workingmen's Savings Bank, Jackson, Mich.	100,000	16,132	849,834	1,070,647
United Labor Bank & Trust Co., Indianapolis, Ind.	112,500	26,712	702,326	843,572
Hawkins County Bank, Rogersville, Tenn.[1]	50,000	50,000	596,627	731,627
Gary Labor Bank, Gary, Ind.	50,000	13,592	606,617	670,674
Labor National Bank, Three Forks, Mont.	25,000	7,053	196,655	248,281
Total (14 banks)	4,112,500	3,105,336	59,817,392	68,953,855

[1] Statement as of Dec. 31, 1929.

Beginning with the establishment of the Locomotive Engineers' Cooperative National Bank in Cleveland in 1920, the labor bank movement increased, at first quite slowly, then with increasing momentum, reaching its high point in 1925 when there were 36 such banks, with deposits of nearly $100,000,000 and total resources of $115,000,000. A decline began in 1926, which has continued from year to year since then.

The Brotherhood of Locomotive Engineers, which at one time owned an interest (in some cases a controlling interest) in some 15 banks, is no longer represented in the labor-banking field, as the above table shows.

Table 2 gives the development of the labor banks since the inception of the movement in 1920:

TABLE 2.—DEVELOPMENT OF LABOR BANKS IN THE UNITED STATES, 1920 TO 1929[1]

End of December—	Number of banks	Share capital	Surplus and undivided profits	Deposits	Total resources
1920	2	$960,000	$192,446	$2,258,561	$3,628,867
1921	4	1,280,000	255,869	9,970,961	12,782,173
1922	10	2,050,473	742,689	21,901,641	26,506,723
1923	18	4,222,230	1,353,022	43,324,820	51,496,524
1924	26	6,441,267	1,891,757	72,913,180	85,325,884
1925[2]	36	9,069,072	3,467,829	98,392,592	115,015,273
1926	35	8,914,508	3,837,377	108,743,550	126,533,542
1927	32	8,282,500	3,747,176	103,290,219	119,818,416
1928	27	7,537,500	3,821,205	98,784,369	116,307,256
1929[3]	22	6,687,500	3,807,579	92,077,098	108,539,894
1930[3]	14	4,112,500	3,105,336	59,817,392	68,953,855

[1] Data are from Princeton University, Industrial Relations Section Report, Labor Banking Movement in the United States, Princeton, N. J., 1929, p. 277, and additional data for 1930 furnished directly to the Bureau of Labor Statistics by the University.
[2] Amalgamated Bank of Philadelphia not included.
[3] Data are as of June 30.

Thirteenth International Cooperative Congress [1]

THE thirteenth congress of the International Cooperative Alliance was held in Vienna August 25 to 28, 1930, and was attended by 554 delegates from 35 countries. This congress, it is reported, was regarded as one of the most significant meetings ever held since the first congress in 1895.

Cooperative banking.—In many countries the central cooperative banking organizations have resources greater than are needed for the development of the national cooperative movement. A report on the subject of cooperative banking discussed the possibilities of utilizing these spare funds for the assistance of cooperative organizations in need of financial aid. A resolution adopted by the congress urged a study of the international cooperative resources and the possibility of their use in international trade either by the establishment of an international cooperative bank or through the International Cooperative Wholesale Society or International Cooperative Assurance Committee.

Rochdale principles and credit trading.—A resolution adopted by the congress directed the appointment of a special committee "to inquire into the conditions under which the Rochdale principles are applied in various countries and, if necessary, to define them."

One of the principal addresses dealt with the Rochdale principles and the problem of credit trading in the cooperative movement. The speaker pointed out a growing laxity as regards adherence to the fundamental cooperative principles, including the practice of doing busi-

[1] Data are from Review of International Cooperation (London), September, 1930, and Industrial and Labor Information (Geneva), Sept. 22, 1930.

ness only for cash. The importance of the cooperative credit movement was recognized by the delegates. As the credit societies provide the necessary avenue of credit, a resolution was adopted favoring the expansion of this phase of the movement, but condemning the assumption of the credit function by the cooperative stores except where the latter have a special savings department. As regards credit trading the resolution urged upon all the movements affiliated with the Alliance "the necessity of safeguarding the unconditional recognition and observance of the well-tried principle of cash payments in all consumers' societies, and to do all in their power to oppose the giving of credit to members of consumers' cooperative societies."

Relations with agricultural cooperation.—The rules of the International Cooperative Alliance allow the admission to membership of all types of cooperative organizations—workers' productive, credit, and agricultural as well as consumers' associations—and in many instances all the branches of the movement in a particular country have become affiliated with the Alliance. The general impression among the nonaffiliated cooperative organizations, however, has been that the Alliance represents only the consumers. The whole subject was brought up at the congress through several reports, one giving the results of a general inquiry as to relations between consumers' and producers' cooperation in various countries, one dealing with marketing, pooling, and financing of cooperative producers' organizations, and one describing the history and organization of the Canadian wheat pools. The speakers were of the opinion that there was no real conflict of interest between these two principal branches of the movement and that there was sufficient ground for common action. The congress finally passed a resolution indorsing the efforts made by the Alliance to bring about closer relations between the producers' and consumers' organizations and urged it to "do all in its power to define the essential cooperative basis of the different forms of organization; to promote their establishment; and to recruit them to the membership of the International Cooperative Alliance."

Other action by the congress.—Other resolutions adopted included one declaring for free trade among all the nations in order that the people of the world may be "relieved from the constant threat of the lowering of their standard of living and that, by the reestablishment of the purchasing power of the consumer, production may also be revived," and one urging effort by cooperators to the end that national cartels (or trusts) be made subject to the control of the State and that international cartels be controlled by the League of Nations.

The next congress will be held in London in 1933.

Labor Union Bank in Austria

A LABOR union bank in Vienna, Austria, has been in operation since January 1, 1923. An account of the activities of this institution is contained in the report of Mr. Ernest L. Harris, United States consul general at Vienna, Austria, August 9, 1930. In 1923 the assets and liabilities of the bank amounted to $81,092; on January 1, 1930, this amount had increased to $8,374,637. Considering the general financial and economic conditions of Austria during the past seven

years, where a large percentage of the population has been sustained by unemployment insurance benefits and State doles, these figures set forth in the bank's balance sheet may be regarded as pointing to a successful financial enterprise, especially in view of the fact that the bank's clients are very small depositors and that the clientele upon which the bank must depend for future deposits is decidedly limited on account of the exigencies of life which beset the Austrian wage earners. His savings on the whole are never large and the inroads made upon his income are such that at the end of the week or month, as the case may be, there is little left to be carried to the labor bank.

The capital of the bank is held, to a great extent, by labor unions. Its working capital consists chiefly of the moneys of labor unions (*Gewerkschaftsgelder*) or money paid into the unions monthly by their members. In addition, the cooperative community stores deposit their profits with the labor bank. On the other hand, the same stores draw on the labor bank for loans.

The original purpose of the bank was to serve the various business enterprises of organized labor and to make them independent of private or purely commercial banks. The labor bank plans to establish its branches all over the country, thus creating an organization which eventually will be sufficiently strong to conduct all the financial business of the labor organizations in Austria.

As stated above, the depositors in the labor union bank are largely labor unions and their cooperative stores and other business enterprises. The bank therefore suffered less from deposits being withdrawn than did the private or commercial banks of Vienna because of the elimination, to a great extent, of the individual depositors. The labor organizations, having confidence in their own enterprise, did not withdraw deposits. That the bank has successfully withstood the depression of the past year has greatly increased its prestige in Austria, and it now enjoys the reputation of being conducted along sound banking lines and of being conservative in character but entirely devoted in its aim and scope to the interests of wage earners. From 1928 to 1929 the deposits increased more than 30 per cent. Architects are now drafting plans for a substantial business building to be erected shortly as a home for the bank.

LABOR CONGRESSES

1930 Convention of the American Federation of Labor

THE annual meeting of the American Federation of Labor at Boston, October 6 to 17, 1930,[1] brought the organization's record up to half a hundred conventions. At the afternoon session of the first day, the President of the United States spoke to the delegates on industrial and economic conditions. He stated that according to a report made by the United States Department of Commerce "public works and the construction work by the railways and utilities in the last eight months amount to about $4,500,000,000 as compared with about $4,000,000,000 in the same period of the boom year of 1929, or an increase of about $500,000,000. In all previous depressions these works decreased, so that the gain is more than even the apparent figures." He spoke of the great advance which had been made by the directors of industry and labor leaders "toward a new and common ground in economic conceptions" and told the delegates that such progress "has had a profound effect upon our economic progress during the last few years."

> That is the conception that industry must be constantly renovated by scientific research and invention; that labor welcomes these labor-saving devices; that labor gives its full and unrestricted effort to reduce costs by the use of these machines and methods; that the savings from these reduced costs shall be shared between labor, employer, and the consumer. It is a philosophy of mutual interest. It is a practice of cooperation for an advantage that is not only mutual but universal. Labor gains either through increase of wage or reduction of cost of living or shortened hours. Employers gain through enlarged consumption, and a wider spread distribution of their products, and more stable business. Consumers gain through lower cost of what they buy. Indeed, mass production must be accompanied by mass consumption through increased standards of living.

Toward the close of his remarks the President said:

> With the job secure, other questions can be solved with much more assurance. You, as workers, know best of all how much a man gains from security in his job. It is the insurance of his manliness, it upholds the personal valuation of himself and of his family. To establish a system that assures this security is the supreme challenge to our responsibility as representatives of millions of our fellow workers and fellow citizens. The discharge of that responsibility does not allow present difficulties to rob us of our clear vision or the wholesome faith and courageous aggressive character for which our country has been long the leader of the world.
>
> The demonstration of nation-wide cooperation and team play and the absence of conflict during this depression have increased the stability and wholesomeness of our industrial and social structure. We are justified in feeling that something like a new and improved tool has been added to the working kit for the solution of our future problems.

In the opening speech of the president of the American Federation of Labor, the need for the immediate inauguration of the 5-day week was given special prominence. Among others who addressed the delegates were outstanding trade-union leaders, the Secretary of Labor, the Secretary of War, the Director of the Women's Bureau,

[1] American Federation of Labor. Report of proceedings of the fiftieth annual convention (advance copy), Boston, 1930; Report of the executive council to the fiftieth annual convention, Boston, 1930.

the Governor of Massachusetts, Hon. David I. Walsh, United States Senator, Hon. Robert F. Wagner, United States Senator, the Mayor of Boston, representatives of various religious bodies, the National Commander of the American Legion, and the secretary of the Workers' Education Bureau.

Report of Executive Council to the Convention

THE average paid-up or reported membership of the Federation for the year ending August 31, 1930, was 2,961,096,[2] an increase of 27,551 over the preceding year. Such membership was distributed in 29,226 local unions in the 104 national and international unions with 2,942,946 members, and in 348 local trade and Federal labor unions which are directly affiliated with the American Federation of Labor and have 18,150 members.

The balance on hand and total receipts for the year under review were $895,164.31 and the total expenditure, $531,442.93, the balance on hand August 31, 1930, being $363,721.38 of which $61,474.58 is in the general fund and $302,246.80, in the defense fund.

Unemployment.—The development of unemployment in the present industrial depression is outlined in the report. Such unemployment is declared to be the outstanding economic fact of the past year, and attention is drawn to the failure of management to prepare for or control the existing situation.

It is pointed out that in 1930, as a result of the efforts to maintain wages, there were fewer wage cuts immediately after the depression than in 1924, although the income of the workers showed a sharper decline as a result of part-time employment. In the slump of 1921 wage reduction was the first step taken and practically no attempt was made to keep the workers employed.

It is also stated that in the industries upon which two-fifths of our wage earners are dependent for their livelihood there were 900,000 fewer workers employed in 1929 than in 1919, although the business handled was far greater. According to the executive council, there is no information as to whether the workers dropped as a result of more efficient methods were able to secure jobs. The increasing importance of the problem of part-time employment is emphasized and the council reports that the American Federation of Labor is beginning to collect data on such employment among members of affiliated trade-unions. Attention is called to reports of relief, showing that during the first six months of 1930 charity organizations in 79 cities disbursed $24,000,000.

White House conferences.—Reference is made to the calling together by President Hoover of industrial, railroad, and labor representatives in order to promote industrial stability through the maintenance of wages. This section of the report of the executive council closes as follows: "Difficult as this long depression is proving itself, it has disclosed with striking distinctness a growing responsibility on the part of management for the workers on their pay rolls and an appreciation of wage earners as consumers."

Unemployment program.—The following program is proposed for coping with the shrinkage in jobs: (1) Reduction in hours of work;

[2] It is estimated that there were at least 500,000 members for whom per capita tax was not paid to the Federation.

(2) stabilization of industry; (3) efficient management in production and in sales policies; (4) nation-wide system of employment exchanges; (5) adequate records of both employment and unemployment; (6) use of public works construction in cyclical depressions; (7) vocational guidance and retraining for workers displaced by technical changes; (8) special investigation of technological unemployment; (9) study of proposals for relief; (10) education to equip all for life and work problems.

Union progress.—Included in this section is a map showing the geographic distribution of the 5-day week among 532,894 trade-unionists, New York leading with more than 185,000 workers.

Over $32,242,000 were paid in benefit services of the national and international unions in 1929—a substantial increase as compared to the preceding year, the disbursements for the different classes of benefits being as follows:

Sick benefits	$2, 831, 936. 82
Death benefits	17, 598, 282. 03
Unemployment benefits	276, 717. 50
Old age pensions	4, 883, 027. 88
Disability benefits	2, 707, 187. 63
Miscellaneous	3, 945, 287. 63

Jurisdictional problems.—Efforts were made to adjust differences between stationary firemen and engineers; cigar makers and tobacco workers; flint-glass workers and glass-bottle blowers; theatrical stage employees and electrical workers and certain other organizations affiliated with the Building Trades Department; hod carriers and independent bricklayers' helpers; teamsters and railway clerks; and flint-glass workers and machinists. In two cases these efforts were successful and progress was reported in the others.

Organization work.—After a discussion of the difficulties involved in organizing mass production industries and of the necessity of adopting union technique to new conditions, the report stresses the need of a survey of such industries in order to ascertain the facts and strategic situations which must be known before a constructive program can be formulated and recommends that when the requisite data are available the council be authorized to form a committee to initiate organization activities in selected fields.

A record of the southern organizing campaign occupies considerable space in this section of the report, including an account of the inauguration of the work, of President Green's southern tours, and of the establishment of headquarters at Birmingham, statements concerning the distribution of American Federation of Labor literature, the response of the southern workers, and the program for the coming years.

The United Textile Workers have had five organizers working in the southern campaign; nine other organizers of internationals have been working under the Birmingham office and seven have cooperated in the campaign under the direction of their international offices, making a total of 21 field representatives in all in addition to the Federation organizers. Fourteen other internationals also have organizers in the field, working in different localities, making a total of 51 organizers in all, including those of the American Federation of Labor.

Up to September, 1930, 112 local unions had been organized in different crafts affiliated with the American Federation of Labor, and five central labor unions. The greater number are in South Carolina, where 21 locals were organized, and Alabama and Tennessee report a number of new locals.

Older workers.—A summary of a recent study by the State of California of middle-aged and older workers within its boundaries is presented in the report and the recommendation is made that all State federations urge upon their respective State labor bureaus the importance of making investigations on the same subject in their own jurisdictions.

Service and educational work.—Under this caption there are subdivisions on the American Federationist, the Federation's Weekly News Service, Monthly Survey of Business, unemployment statistics, library, notes for speakers, organizing literature, legal information bureau, and the committee on education, and also the Workers' Education Bureau.

National legislation.—The report presents the following list of objectives in legislative measures backed by the Federation which were successful since the last convention: (1) The defeat of the confirmation of the appointment of Judge Parker to the United States Supreme Court; (2) directing the United States Bureau of Labor Statistics to collect statistics of changes in employment; (3) the liberalizing of the civil service retirement act; (4) wage increases for low paid Federal employees; (5) the establishment of a hospital for defective delinquents; (6) providing for parole of prisoners; (7) the regulation of the employment of Federal prisoners; (8) the extension of the vocational education act; (9) the provision of free textbooks for high schools in the District of Columbia; and (10) an appropriation for rural post roads.

The report also notes the interest of the federation in the following proposed legislative measures: For the appointment of a commission to study the practicability and advisability of conscription of property for war purposes; the restriction of immigration; bills to meet unemployment problems; the regulation of wage rates in public works and buildings; the regulation of letting of Government contracts; amendments to the longshoremen's act; retirement act for the Canal Zone; increase of pay for certain post office workers; the unification of the border patrol; extension of maternity and infancy act; Saturday half holiday for Federal employees; reform in prison methods; exclusion of Russian coal; safety bureau in Department of Labor; and proposed "equal rights" amendment.

Nonpartisan political campaign.—The report states that injunction relief legislation was made the principal issue in the federation's nonpartisan political activities, every candidate for the United States Congress being asked if he would support the anti-injunction bill introduced by members of the Senate Judiciary Committee and recommended in the minority report of that committee.

Railroad consolidation.—In reporting upon congressional consideration of railroad consolidation, stress is laid upon the need for the inclusion of protective provisions for employees, shippers, and communities, under any plans approved.

Porto Rico.—The report declares that the basic difficulty of the island is poverty which "seems due to insufficient native capital, lack of industries, absentee ownership, incompetent management in agriculture and industry, and illiteracy." Attention is called to the acute unemployment problem in this colonial possession of ours, to the congested quarters of the Porto Rican workers, and to their mal-

nutrition and low vitality resulting from low incomes coupled with the high cost of living. The council recommends that "the convention urge upon the administration and Congress the need for fundamental constructive policies."

Action on Proposals for Solving Unemployment Problems

THE committee on resolutions not only recommended approval of that part of the report of the executive council which dealt with the subject of unemployment, but also recommended to the convention the following, in order that the Nation's attention be focused at once upon the problem of unemployment:

1. That the executive council be instructed to request the President of the United States to immediately appoint a national committee to recommend measures for immediate relief, having in mind proposals that can be carried out by private and quasi public agencies and enterprises, as well as by the departments of the Federal Government, the departments of the State Governments and by municipalities, counties, school districts, and other divisions of government.
2. That the executive council be instructed to call upon all State federations of labor to request the governors of their respective States to appoint State committees to cooperate with the national committee proposed in paragraph 1, and to initiate recommendations within their respective States.
3. That the execvtive council be instructed to call upon all affiliated central bodies in the United States to urge the mayors or similar officials of their respective cities to immediately appoint city committees to cooperate with the State and National committes provided for in paragraphs 1 and 2 and to initiate relief programs within their respective cities.
4. That the executive council be instructed to proceed in such manner as the council may find practicable to bring about the establishment of similar committees in localities where there are no affiliated central labor organizations through which to act.
5. That the executive council determine the best procedure to follow in obtaining appointment of similar committees in the Territories of Alaska, Hawaii, and Porto Rico.
6. That the affiliated central bodies in the Dominion of Canada be urged to cooperate with the Canadian Trades and Labor Congress in the promotion of unemployment relief measures in Canada.

The report of the committee on resolutions on the above matters was unanimously adopted.

Five resolutions, Nos. 16, 17, 51, 76, and 92, in favor of unemployment insurance were introduced, one recommending that the funds therefore be provided by a graduated income tax on incomes in excess of $25,000, another that such insurance be a charge on industry in the same manner as workmen's compensation for accidents. Resolution No. 38 proposed a study of remedial legislation to relieve unemployment.

There was considerable debate in connection with these various proposals, but the convention finally agreed to refer all six resolutions to the executive council, which had already been charged by the convention to make "a thorough investigation of all plans, legislative and otherwise, that have been discussed or suggested" in relation to the topic under discussion.

A resolution was also passed that the president of the American Federation of Labor and the presidents of the departments request the President of the United States to create a long-range planning committee to avert unemployment.

Resolution on the 5-hour Day

THE last two paragraphs of Resolution 21, introduced by James O'Connell, president of the Metal Trades Department of the American Federation of Labor, read as follows:

Whereas, the Metal Trades Department of the American Federation of Labor, after giving these economic and industrial facts careful thought and exhaustive examination in its twenty-second annual convention just adjourned, through a unanimous vote declared in favor of a basic 5-hour day, with the provision that where necessary two or more 5-hour shifts may be established in industries requiring partially continuous or continuous production, or where the demand may require a greater production during certain periods; therefore, be it

Resolved, That this fiftieth annual convention of the American Federation of Labor declare for a basic 5-hour workday, pledge itself to take the necessary steps to bring about its operation and establishment at the earliest possible day.

It was unanimously voted that this resolution be referred to the executive council with instructions to give immediate and thorough consideration to the subject; to secure all available statistical data relative to the problem, and to report to the 1931 convention their conclusions; and also to make "a recommendation for the length of work day and work week, which the American trade-union movement should apply all its energies to establish."

Other Resolutions and Decisions

THE following is a résumé of the action of the convention on various other important matters:

Government employment.—The passage of H. R. 9930, which proposes the restriction of the employment of enlisted men in the Navy in competition with civilian workers was favored as was also legislation providing for the employment on Federal penal institution construction work of civilian mechanics only. The executive council was requested to continue its efforts to secure a $50 increase of pay for each grade of laborers in the Postal Service. Protest was made against the labor policy of the War Department in West Point construction work. Vigorous opposition was expressed to employing alien workers in the construction of any ships being paid for in whole or in part by the United States Government. The delegates were also in favor of steps being taken to see that Government contracts provide for prevailing wage scales.

Organization activities.—The energetic continuation of the organization of southern workers was approved. An appeal for the support of the strike of the Danville textile workers was authorized, and the efforts of the American Federation of Teachers to organize teachers into trade-unions were indorsed. The patronage of retail stores employing union clerks was urged.

Mechanization problems.—A recommendation was approved that the executive council be instructed to study the patent laws in relation to processes and machinery used in production and transportation, with a view to making recommendation for any change in such laws that the council may regard as necessary for the protection of workers and the public in general. Indorsement was given to the appeal of actors and musicians for the support of popular movement against the mechanization of the cultural arts.

Anti-injunction legislation.—The convention favored the active support of a bill to be substituted for Senate bill 2497, to define and limit the jurisdiction of Federal courts to issue injunctions in labor disputes and to outlaw the so-called "yellow dog" contract.

Porto Rico and the Philippines.—The adoption of a legislative program for the relief of the Porto Rican people was favored and also the complete independence of the Philippines.

Immigration.—The convention went on record in favor of the restriction of Filipino and Mexican immigration, and it was demanded that steps be taken at once to discontinue border-crossing privileges to workers living in adjoining countries and holding jobs in the United States.

Miscellaneous.—The establishment of a Federal bureau to test the effect upon the health of workers of chemical compounds, materials, and processes used in industry was urged. The passage of Joint Resolution 334, which proposes specified radio broadcasting rights for the Departments of Agriculture, Labor, and the Interior was favored, and a resolution was adopted advocating the disposal of the Muscle Shoals project in such a way as fully to protect the rights of the public. The officers of the Federation were called upon to take up with affiliated organizations in States not having an 8-hour workday for women and minors the matter of starting immediately a movement for the establishment of a workday of not over 8 hours for such wage earners.

Officers Reelected

WILLIAM GREEN was reelected president, and Frank Morrison and Martin F. Ryan will again serve respectively as secretary and treasurer. Vancouver will be the 1931 convention city.

Convention of Commercial Employees in Rio de Janeiro [1]

THE Association of Commercial Employees of Rio de Janeiro, having a membership of 38,000, held a convention in March, 1930, in which 46 employees' organizations were represented.

Among the resolutions adopted by the congress were the following: Proposing a number of amendments to the administrative regulations for the application of the law relating to holidays with pay, for the purpose of stricter enforcement; favoring a minimum wage for apprentices and higher salaries for employees in view of the fact that the cost of living is three times as high as before the war while salaries are less than twice as high; favoring legal assistance for the purpose of facilitating the friendly intervention of the association in disputes between employers and employees; and favoring the establishment of pension funds in all employees' associations.

A system of unemployment insurance is to be set up by the Rio de Janeiro association as an experiment.

[1] International Labor Office. Industrial and Labor Information, June 2, 1930, p. 302.

Meeting of British Trades-Union Congress

THE sixty-second annual meeting of the trades-union congress was held at Nottingham, September 1 to 5, 1930, with an attendance of 606 delegates, representing a union membership of 3,744,320. The number of organizations represented, with their membership, for 1929 and 1930 is shown in the following table:

ORGANIZATIONS AND MEMBERSHIP REPRESENTED AT TRADES-UNION CONGRESS

Group of organizations	1929		1930	
	Number of organizations	Membership	Number of organizations	Membership
Agriculture	1	30,000	1	30,000
Mining and quarrying	7	623,131	8	629,025
Metals, machines, etc	46	500,333	49	507,640
Textiles	29	463,741	29	460,222
Clothing	8	156,422	8	154,881
Woodworking and furniture	8	57,048	8	58,376
Paper, printing, etc	12	135,976	12	140,925
Building, public works contracting, etc	9	286,349	9	288,300
Food, pottery, and other manufacturing industries	12	41,045	14	43,573
Railway services	3	411,878	3	411,505
Other transport	4	340,869	5	503,508
Commerce and finance	8	178,777	8	187,358
Government	6	30,383	6	32,249
Entertainments and miscellaneous	7	35,941	8	35,735
General labor	2	381,251	1	261,023
Total	162	3,673,144	169	3,744,320

It will be seen that most of the groups show rather slight changes, with increases in membership appearing more numerously than decreases. "General labor" shows a serious decrease, which, it is explained, is largely due to the amalgamation of the Workers' Union with the Transport and General Workers' Union, a transfer which also explains the large increase in the membership of "Other transport" unions.

The proceedings of the congress are summarized in the Ministry of Labor Gazette for September, 1930 (p. 322), which states that the main interest of the session centered around the discussion of a memorandum dealing with the position of the British Commonwealth in relation to the world economic situation, and the question of family allowances. The memorandum had urged the organization of the resources and trade of the British Empire, suggesting the formation of an economic bloc, and the discussion arose over a motion to refer it back to the general council.

The debate upon the economic memorandum was well sustained, considerable opposition being shown, the main objections alleged being the memorandum's lack of clarity, its apparent conflict with the international policy of the congress, its effect upon the great exporting industries (e. g., mining), and its resemblance to the imperialist proposals of certain newspapers. The general council's spokesmen sought to show that their memorandum had no relation to any tariff arrangements; that essentially it was an effort to create a definite independent trade-union trading policy, which was necessary in view of approaching Commonwealth conferences; that it aimed at investigating the possibility of controlling and regulating the vast raw material resources of the Commonwealth with a view to trade. The reference back was lost on a card vote by 1,878,000 votes to 1,401,000.

The discussion of family allowances arose over the previous action of the general council. A joint body, consisting of representatives of the general council and of the Labor Party, had been formed to consider the question and had presented two reports, the majority presenting a report signed by nine members recommending allowances, while the minority handed in a report signed by three recommending that no decision on family allowances should be taken until certain specified social services should be fully established. (See Labor Review for September, 1930, p. 90.) The general council had indorsed the minority report, and the discussion turned on the attitude the congress wished to take toward this indorsement. Spokesmen for the council urged that the cost of family allowances made their adoption impracticable and that if they could be adopted their effect would be detrimental to trade-unionism. Supporters of the allowance system declared that the cost was far below expenditures ungrudgingly adopted during the war and that the State should be willing to spend as much to maintain life as to destroy it. "The card vote resulted in 1,347,000 for reference back and 2,154,000 against. The action of the general council was therefore approved."

A strongly worded resolution was passed pressing for a repeal of the trade disputes and trade-unions act, 1927, and for the restoration of the trade-unions to the legal position they occupied prior to the passing of the 1927 act. Rationalization and hours also received attention.

A resolution was carried calling attention to the possible dangers of rationalization, directing the general council to watch its tendencies, urging the necessity for reducing hours in order to limit labor displacements, calling for adequate compensation for persons displaced, and pressing for adequate State pensions for persons over 60 years of age.

Another resolution called upon the general council to consider inaugurating a campaign to secure by legislation a 44-hour week, inclusive of mealtimes. Others called for holidays with pay for all workers, for an alteration of the fair-wages clause, making it mandatory on firms to employ only trade-unionists, not only on public contracts, but also in their ordinary business, and dealt with a number of current matters. There was an evident desire that social services should be improved and increased.

A resolution was passed requesting the Government to increase the existing wages limit for nonmanual workers in national health and unemployment insurance from £250 to £500 [$1,216.63 to $2,433.25] per annum; also that rates of benefit payable for sickness and disablement should be provided within the national health insurance acts equal to those payable for unemployment, and that benefits be payable for wives and dependents. Resolutions were also passed directing attention to the need for the coordination of medical services, and calling attention to the tendency to set off social services against higher wage standards.

The coal industry was made the subject of a special resolution.

The miners' federation moved a resolution directing attention to the international character of the economic problems in the coal-mining industry, and requesting the general council to press for international agreements for the regulation of the coal trade, with uniform hours of labor and adequate standards of living for the mine workers of all countries. Emphasis was placed upon the difficulty of improving conditions in this country unless the standards were applied internationally.

LABOR AGREEMENTS AND AWARDS

Time and Method of Payment of Wages Provided for in Collective Agreements

PRACTICALLY all of the collective agreements received by the bureau make some provision as to the time and method of payment of wages. The day of the month or week, and often the hour of the day, when employees shall be paid are specified. Semimonthly wage payments are provided for in a few agreements of brickmakers, glass workers, miners, paving cutters, railroad workers, street and electric railway employees, and teamsters. A majority of the agreements provide for a weekly pay day and for the payment of wages in United States currency, one agreement specifying that payment shall be made in United States gold coin. Many agreements permit payment of wages by check, but stipulate that if the employer fails to have sufficient funds in the bank to meet all pay checks issued by him he shall be barred from ever paying by check again; others stipulate that payment by check shall be made either Friday at quitting time, or two hours earlier than the usual time of payment on Saturday, in order that the checks may be cashed before the closing hour of the banks. A small number of agreements provide that wages may be paid either in cash or by check.

A majority of the collective agreements provide that wages shall be paid at the place where the work is performed, and that they shall be paid during regular working hours or not later that 15 minutes to one-half hour after quitting time. Those agreements which do not specify payment of wages "on the job" provide that the employee shall be given time during working hours to go to the shop or office of the employer for his wages. A few agreements provide that employees may accept a time check on the office of the employer, but stipulate that two hours' time shall be added to the time check.

Practically all of the agreements provide that if the employee is discharged before pay day he shall be paid in full at time of the discharge and payment shall be in cash. A majority of the agreements provide that if an employee quits his job before pay day he shall wait until the regular pay day for the amount due him, although a number of agreements stipulate that if a member desiring to quit the job give the employer from four to eight hours' notice he shall be paid in full at time of quitting.

The following are examples of the provisions as to time and method of payment of wages as they appear in the various trade agreements:

Bakery and confectionery workers.—Wages shall be paid at the end of each week in United States money. No member permitted to begin a new week's work if not paid for last week's work. Jobbers shall be paid when they finish work.

Brewery and soft-drink workers.—Wages shall be paid weekly in currency. No part of the wages to be withheld.

Pay days shall be on the 5th and 20th of each month. If such date falls on Sundays or holidays, wages shall be paid on the preceding day at close of work.

Brickmakers.—All employees shall collect their wages semimonthly; the pay roll ending with the 15th day of the month shall be paid on the 25th day of each

month, and the pay roll ending with the last day of the month shall be paid on the 10th day of succeeding month, except when these fall on Monday, in which event men shall be paid on Saturday.

Broom makers.—Members shall be paid in full in cash every week. No order or trucking system shall be recognized.

Asbestos workers.—Wages shall be paid weekly during regular working hours.

Bricklayers, masons, and plasterers.—Wages shall be paid each Saturday before noon in currency or check at option of employer, in full to Thursday eve before pay day. Employer who fails to have sufficient funds in bank to meet all pay checks shall be penalized by joint arbitration board, to extent of $5 for each bad check issued, full amount to be paid the man to whom check was issued. Time checks must have two hours' time added. Discharged man must be paid at once. Man quitting shall be paid next regular pay day.

Carpenters and joiners.—Wages shall be paid every Saturday, not later than quitting time on the job, in cash or by bankable check, in full up to preceding Thursday night. Members discharged shall be paid on the work at time or given time check with four hours extra added to pay for traveling time. Member quitting to be paid at next regular pay day.

Cement finishers.—For work done up to Thursday night, regular pay day shall be Friday night, within 30 minutes of quitting time, at every job or place where members are employed. If sent to office, one hour's time and car fare extra. Member discharged paid at once.

Electrical workers.—Wages shall be paid weekly in currency in full up to and including day previous to pay day. The union agrees to accept checks on part of members in lieu of currency whenever laid off prior to regular pay day. It is optional with the members whether or not they will accept checks on regular pay day in lieu of currency.

Elevator constructors.—Wages shall be paid once a week in cash on the job, or if at shop on employer's time and expense.

Hoisting and portable engineers.—Engineers shall be paid weekly on the job in currency, not more than two and one-half days to be withheld. Any contractor who pays with a check and fails to have sufficient funds in the bank to meet all pay checks it will be cause for stoppage of his work immediately. Full amount of wages and expense of collecting must be met before members return, and contractor loses right to issue checks in payment of wages. Employee discharged must be paid in full on job in currency, or if sent to office must have one-half hour's time added for each 3 miles traveled, or fraction thereof.

Hod carriers and building laborers.—During June, July, and August laborers shall be paid Friday not later than 5 p. m.; balance of the year not later than noon Saturday. If three or more laborers on the job they shall be paid on the job; if less they may be paid at office. If discharged shall upon request be paid in cash or office order; if office order one hour additional time added and he must be paid within one hour of time discharged.

Lathers.—Pay day shall be every Friday by 4.30 p. m. Member discharged shall request money due him. Should request be refused the shop shall be closed until said member is paid.

Linemen (electrical workers).—Pay days semimonthly on the 5th and 20th of month at a place designated by the company; 10 days' pay to be withheld.

Mosaic and terrazzo workers.—Members shall be paid each Saturday at or before noon in cash on the job for all time up to Friday night. Any employer paying by check, members shall quit at 11 a. m. to cash same and shall lose no time.

Operative plasterers.—All employers shall pay during working hours on all jobs where three or more men work. Not more than eight hours' pay to be held back in any week. When men are required to call at shop or office for pay they shall be allowed to leave work in time to be paid by quitting time. If member is discharged he may demand all money due him. If not paid may require all members to stop work until he is paid; any member refusing to stop work will be fined.

Painters, decorators, and paper hangers.—Pay day shall be on Saturday between the hours of noon and 1 p. m., not more than one week apart, and all employees shall be paid in full up to Thursday night. Pay shall be in cash. Employers desiring to pay by check must designate place convenient to the shop where check can be cashed the same day in full, free to the employees. Employee discharged must be paid in full at time of discharge.

Plumbers and gas fitters.—Employees shall be paid each week Saturday noon in United States currency or check at option of employer. Any employer not having sufficient funds in bank to meet all pay checks shall be penalized by arbitration board in sum not less than expense of collecting, full amount to be paid employee as well as depriving employer of paying by check in the future.

Sheet-metal workers.—Wages to be paid each Saturday by 12 noon on the job, and shall include all time worked up to the previous Thursday night. When it has been impossible to deliver the money to the job by noon Saturday, members shall go to the shop or office to secure their money. When job is located outside the 4-mile radius from office, workmen shall be entitled to an additional half hour's time. This time shall be recorded separately on time card, together with the name and location of job.

Slate, tile, and composition roofers.—All employees to be paid on Saturday by noon to regular quitting time on Thursday of that week, in United States currency, and they to be paid at the several rates specified herein for all delays or loss of time in this respect occasioned by the employers.

Sprinkler fitters.—All sprinkler companies are requested to pay off in money. Checks will not be accepted. If not paid as above, members to notify local, and no member will be permitted to work for such employer until all members are paid in full.

Structural and ornamental iron workers.—Workmen shall be paid weekly on city work and at least once every two weeks on road work. Men must be paid not later than regular quitting time, and not over one and one-half days' pay shall be held back on city work and not more than three days' on road work. Discharged man must receive his pay at once or he shall receive regular wage scale until paid.

Cigar makers.—All wages must be paid in cash weekly. Men quitting or discharged shall be paid in cash before leaving the shop.

Cloth hat, cap, and millinery workers.—Workers shall be paid on a regular day each week in cash.

Fur workers.—Wages shall be paid every Friday in cash. Worker discharged before end of week entitled to full week's pay. Not notified of discharge on or before last working day of week shall entitle him to a full week's compensation for following week.

Ladies' garment workers.—Payment of wages shall be made weekly, in cash, on a fixed day. Wages shall include all work completed 48 hours before pay day.

Men's clothing workers.—Wages shall be paid in cash to all workers each and every week.

Journeyman tailors.—Tailors must be paid weekly not later than 5 p. m. Saturday.

Dyers, cleaners, and pressers.—Payment for current week's work shall be made not later than Tuesday of following week.

Coopers.—Wages shall be paid each Saturday noon and paid in currency.

Glass-bottle blowers.—All workmen shall be compelled to receive and manufacturers must pay in full in cash, every two weeks, and not more than one week's earnings shall remain unpaid. There shall be no deductions for private accounts or bills against the workmen. Apprentices shall be paid in full their proportion of wages every pay day.

Window-glass cutters.—Cutters shall be paid weekly. Glass cut one week shall be paid for on the following Saturday.

Hotel and restaurant employees.—Wages shall be paid weekly, except for extra work or employees discharged, who shall be paid immediately.

Laundry workers.—Wages shall be paid weekly in United States gold coin. The employers shall be allowed to hold back three days' pay. Worker who quits or is discharged shall be paid within 24 hours.

Longshoremen.—Pay-roll week to end 6 p. m. Thursday and men to be paid Saturday afternoon. Pay windows to be open as near 3 p. m. as possible and remain open until 7 p. m. if necessary.

Blacksmiths, drop forgers and helpers.—All wages shall become due and be paid on the job each week. Blacksmiths shall not be compelled to stand in line for their pay and not more than two days' pay shall be held back.

Boiler makers and iron-ship builders.—Men shall be paid weekly on a designated day in cash, during working hours. In case of discharge men will be paid immediately. Men leaving job shall receive all wages due next pay day. Not more than two days held back in any week. Failure to pay wages during working hours on specified day, men shall be paid double time for waiting.

Machinists.—All employees must be paid on a regular pay day and any employees being laid off, discharged, or quitting of his own volition shall receive all wages and personal property belonging to him inside of 24 hours.

Meat cutters and butcher workmen.—Employees shall be paid on a regular day each week, in cash, during working hours. Temporary employees are to be paid when work ends.

Coal miners, bituminous.—Company agrees to pay twice a month, on the 14th and 29th, at all mines operated by this company. Itemized statements shall be issued to employees two days prior to pay day. When regular pay day comes on Sunday or holiday, pay day to be the day before. Men quitting employ of company shall, upon giving proper notice, receive all moneys due them within two days.

Coal miners, anthracite.—The principle of paying employees by check is recognized in communities having banking facilities reasonably accessible, and the mine workers agree to make local agreements permitting such practice where practicable and reasonable.

Pocketbook workers.—It is understood that the members of the union are to receive their pay in cash on the last day of each week, and in no event later than Monday, for all work performed by them.

Bookbinders.—All wages to be paid weekly in cash not more than three days after close of fiscal week. All employees to be paid within 10 minutes after quitting time. If pay day falls on a legal holiday employees shall be paid on preceding working day. Discharged employees must be paid at once.

Photo-engravers.—All wages shall be paid in currency and in full on Friday or Saturday of every week, except those months in which the 5-day week is in effect, when all members shall be paid on Friday. No member shall be required to accept a check in payment of wages.

Printing pressmen and assistants.—It is agreed that wages shall be paid weekly in cash or current funds, and there shall be no deviation from this rule whatsoever.

Typographical workers.—All wages shall be paid weekly in United States currency and in no case shall wages in excess of two days be held back, provided when an employer has reason to believe his pay roll is in danger of being robbed he shall have the right to pay in checks drawn on a downtown bank.

There shall be a regular weekly pay day and a stipulated hour. Offices shall not change hour until seven days' notice has been posted on the bulletin board.

Railroad shopmen.—Employees will be paid off during the regular working hours of the first shift, semimonthly, except where existing State laws provide a more desirable paying-off condition. Employees leaving the service will be furnished with a time voucher covering all time due within 24 hours where pay certificates are issued and within 48 hours at other points, or earlier when possible. During inclement weather provision will be made, where buildings are available, to pay employees under cover.

Granite cutters.—Members shall receive their wages weekly on or before Friday, 5 p. m., during working hours. Week to end Thursday. Discharged member shall be paid at the time. Member quitting shall be paid not more than four hours later.

Paving cutters.—Cutters paid every Saturday not later than 11 a. m., with one week lay time. Discharged man shall receive his pay in full same day. If cutter quits and leaves district he shall be paid in full within 24 hours.

Pay day shall be every other Saturday, with 12 days' lay time. Any cutter discharged shall be paid in full in five hours.

Stone cutters.—Enployees shall be paid weekly in cash during working hours. Two days shall be allowed for making up pay roll.

Quarry workers.—Wages shall be paid weekly during working hours in cash; 45 hours may be held back to complete the pay roll. Any workman discharged or leaving job must be paid same day in full in cash or by check.

Street railway employees.—The wages of all employees covered by this agreement shall be paid in United States currency semimonthly, on the 12th and 26th of each month. If either of these dates falls on a Sunday or a holiday the wages shall be paid in advance of such date.

Teamsters and chauffeurs.—The guaranteed salary shall be paid semimonthly; commissions shall be paid not later than the 10th of following month.

Upholsterers.—Members shall be paid on regular weekly pay day and in cash. No checks shall be issued by any employer to members of the union as payment of wages

Agreement of Coal Miners with Rocky Mountain Fuel Co.

THE Rocky Mountain Fuel Co., of Colorado, and the United Mine Workers, District No. 15, recently negotiated a new agreement effective from September 1, 1930, to August 31, 1932.

The basic wage scale remains the same as in the 2-year contract which expired August 31, 1930. There are a number of changes in sections relating to working conditions. An additional clause in the declaration of principles is as follows:

> To stabilize employment, production, and markets through cooperative endeavor and the aid of science, recognizing the principle that increased productivity should be mutally shared through the application of equitable considerations to the rights of workers and to economic conditions affecting the operators and business of the company.

The policy adopted by the company at some of its mines last spring of alternating work among the men so that none of them was laid off during the slack spring and summer season was approved and agreed upon as a policy to be followed in all the mines of the company in the future.

Reduction of Wages in Iron and Steel Industry in Germany

IN April of this year the metal workers' labor unions gave notice of their intention of terminating the trade agreement with their employers of the northwest group of the German iron and steel industry unless their demands for certain improvements in labor conditions were accepted by the employers.[1] Among other improvements demanded were the 48-hour week and certain regulations relating to overtime and holidays with pay. Negotiations between the contracting parties failed, and the dispute was submitted to the Government conciliator. The employers claimed that the financial conditions of the industry were such that the production cost should be reduced and that this required a reduction in wages. On May 26, 1930, an arbitration award was issued conceding the employers' demand for the abolition of the award made in December, 1928,[2] which provided that the prevailing piece rates might not be changed except as a result of improvements in technical processes or organization, and authorizing a reduction of the total wages bill by 10 per cent.

The labor unions rejected the award, but the employers applied to the Federal Ministry of Labor to declare the award binding. In the discussion of the case by representatives of labor unions and employers' associations no agreement could be reached. Finally the employers agreed to limit the reduction to 7½ per cent of the wages and salary bill. On this basis the award was declared binding by the Minister of Labor. Employers are thus entitled to reduce all rates in excess of the basic wages to such an extent that a saving of 7.3 per cent of the total wage bill will result. The cut is to be conditional upon a reduction of prices to become operative one month before the reduction of wages. The Minister of Labor may, with the assistance of experts, ascertain that the price reductions are adequate.

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[1] International Labor Office. Industrial and Labor Information, Geneva, July 14, 1930, pp. 75, 76.
[2] Monthly Labor Review, January, 1929, pp. 116–120.

In general, the basic rates of wages remain unaffected by the award, but slightly increased minimum rates of wages are provided for helpers and juvenile workers. This is the first time that an attempt has been made to lower prices by means of the Government arbitration machinery for industrial disputes in Germany. It is expected that the fall in wages will ultimately be counteracted by a fall in prices of consumers' goods for domestic use as well as for export.

The Minister of Labor stated that he had declared the award binding because the labor unions had given notice of terminating the trade agreement at the wrong moment, that the award did not change the basic wages; that in the interest of the State it would have been undesirable to leave one of the most important industries without a trade agreement, which would have led to disputes; and that, moreover, the employers had undertaken to reduce the prices of iron and steel to an extent exceeding the reduction of wages of pieceworkers.

However, the award accords certain small advantages to the workers in connection with family allowances.

In labor union circles it is believed that the award marks the beginning of a general campaign for the reduction of wages, and that it is therefore likely to be opposed by labor unions.

(NOTE.—According to press reports about 150,000 metal workers in Berlin went on strike on October 15, 1930. The strike ended on October 30, when the employers and wage earners in the metal trades reached an agreement providing for the immediate resumption of work under the same conditions which existed prior to the Government's arbitration award. A special commission agreed upon is to render a new award in a week's time, which award shall be binding on both parties to the dispute.)

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in September, 1930

DATA regarding industrial disputes in the United States for September, 1930, with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in 1927, 1928, and 1929, number of workers involved, and man-days lost for these years, the number of industrial disputes for each of the months January, 1928, to September, 1930, inclusive, the number of disputes which began in these months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1928, TO SEPTEMBER, 1930, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS 1927, 1928, AND 1929

Month and year	Number of disputes—		Number of workers involved in disputes—		Number of man-days lost during month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1927: Total	734		349,434		37,709,394
1928: Total	629		357,145		31,556,947
1929: Total	903		230,463		9,975,213
1928					
January	48	63	18,850	81,880	2,128,028
February	52	58	33,441	103,496	2,145,342
March	41	47	7,459	76,069	2,291,337
April	71	48	143,700	129,708	4,806,232
May	80	56	15,640	133,546	3,455,499
June	44	46	31,381	143,137	3,670,878
July	54	42	18,012	132,187	3,337,386
August	59	42	8,887	105,760	3,553,750
September	52	34	8,897	62,862	2,571,982
October	61	42	27,866	41,474	1,304,913
November	44	38	37,840	38,745	1,300,362
December	23	29	5,172	35,842	991,238
1929					
January	48	36	14,783	39,569	951,914
February	54	35	22,858	40,306	926,679
March	77	37	14,031	40,516	1,074,468
April	117	53	32,989	52,445	1,429,437
May	115	73	13,668	64,853	1,727,694
June	73	57	19,989	58,152	1,627,565
July	80	53	36,152	15,589	1,062,428
August	78	43	25,616	6,714	358,148
September	98	49	20,233	8,132	244,864
October	69	31	16,315	6,135	272,018
November	61	32	10,443	6,067	204,457
December	33	21	3,386	2,343	95,541
1930					
January	42	21	8,879	5,316	182,202
February	44	33	37,301	6,562	436,788
March	49	34	15,017	5,847	289,470
April	60	41	5,814	5,711	180,445
May	64	30	9,281	4,640	192,201
June	54	34	13,791	8,499	150,627
July	76	31	14,219	5,039	148,982
August [1]	50	35	15,426	7,112	145,696
September [1]	66	48	15,100	13,970	203,126

[1] Preliminary figures, subject to change.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives, by industry, the number of strikes beginning in July, August, and September, 1930, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN JULY, AUGUST, AND SEPTEMBER, 1930

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	July	August	September	July	August	September
Bakers	1	1		13	6	
Barbers	1	1		2,000	650	
Brick and tile	1			125		
Building trades	26	13	12	2,740	708	563
Chauffeurs and teamsters	1	2	1	65	103	23
Clerks and salesmen	1		1	800		19
Clothing	12	11	11	2,769	7,707	4,422
Electric and gas appliance workers		1			108	
Farm labor	1			300		
Fishermen	1			25		
Food workers	1			17		
Furniture	2	2	5	35	55	586
Hospital	1			24		
Hotel and restaurant workers	1			475		
Iron and steel		1			416	
Leather		1			25	
Light, heat, and power			2			209
Longshoremen—freight handlers	1	1		150	252	
Lumber and timber	1			400		
Metal trades	3	2	4	594	264	106
Miners	10	4	14	3,006	3,625	3,931
Motion-picture operators, actors, and theatrical employees	2	1	8	52	11	705
Paper and paper goods		1			35	
Printing and publishing	1	1	1	6	10	13
Railway workers		1			106	
Stationary engineers	1			125		
Stone	1	1		37	39	
Municipal workers	1	1	1	225	50	200
Textiles	5	3	4	236	839	4,193
Tobacco			1			100
Other occupations		1	1		417	30
Total	76	50	66	14,219	15,426	15,100

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in September, 1930, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN SEPTEMBER, 1930, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in September, 1930, involving—				
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers
Building trades	3	7	2		
Chauffeurs and teamsters		1			
Clerks and salesmen	1				
Clothing	3	4	1	2	1
Furniture	2	1	2		
Light, heat, and power	1		1		
Metal trades	2	2			
Miners		2	11		1
Motion-picture operators, actors, and theatrical employees	3	2	3		
Printing and publishing	1				
Municipal workers			1		
Textiles	1	1	1		1
Tobacco			1		
Other occupations		1			
Total	17	21	23	2	3

In Table 4 are shown the number of industrial disputes ending in September, 1930, by industries and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN SEPTEMBER, 1930, BY INDUSTRY AND BY CLASSIFIED DURATION

Industry	Classified duration of strikes ending in September, 1930			
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months
Building trades	7	4	1	1
Chauffeurs and teamsters	1			
Clerks and salesmen	1			
Clothing	5		1	1
Furniture	3		1	
Light, heat, and power	2			
Metal trades	4			
Miners	4		1	
Motion-picture operators, actors, and theatrical employees	2	2	1	1
Printing and publishing	2			
Railway workers		1		
Stone	1			
Municipal workers	1			
Textiles	2			1
Tobacco	1			
Other occupations		1		
Total	36	8	5	4

Principal Strikes and Lockouts Beginning in September, 1930

Neckwear makers, New York City.—Demanding that the manufacturers furnish bonds to guarantee compliance with their agreement with the union, 500 men's necktie makers, members of the United Neckwear Makers' Union, conducted a successful strike from September 3 to September 12. About 35 "down-town" shops were involved.

Anthracite coal miners, Pennsylvania.—A brief strike lasting from September 16 to September 18, affecting the operations of the Glen Alden Coal Co. at Ashley and involving 1,550 miners, is reported to have been caused by an alleged violation of seniority rights. The miners, however, agreed to return to work and take their case up through proper channels.

Women's tailors and dressmakers, New York City.—Approximately 2,500 workers, members of the Ladies' Tailors Theatrical Costume and Alteration Workers' Local 38 and of Cutters' Local 10, of the International Ladies' Garment Workers' Union, began a strike on September 25 to enforce demands, according to press reports, for a wage increase of $3 per week for tailors and improved working conditions for unorganized dressmakers. They also sought withdrawal of the employers' demand for the right to discharge up to 20 per cent of their force without such action being subject to review. The strike was directed principally against the Coutouriers Association, composed of seven leading Fifth Avenue firms.

By October 10 it was reported from union sources that settlements which met the union demands had been effected with 32 independent

shops (including a leading establishment) employing about 900 workers.

Textile workers, Virginia.—According to press reports, some 4,000 employees of the Riverside and Dan River Cotton Mills (Inc.), of Danville, began a strike on September 29, which is still in progress. Accounts are conflicting both as to the number of workers directly involved and as to their grievances. A spokesman for the United Textile Workers, the organization with which the strikers are affiliated as Local 1685, says the strike was put into effect because of refusal of mill officials to permit workers to belong to the union, discrimination, and other grievances. A strike at the mills had been approved by a vote of the workers taken on September 17 and 18. At that time it was stated that 95 per cent of the union membership voted in favor of calling a strike.

An offer from the governor to appoint a mediation committee was accepted by the strike management committee but was rejected by the company.

Principal Strikes and Lockouts Continuing into September, 1930

Cooks, waiters, waitresses, Ohio.—No report has been received of the ending of the strike-lockout in Cleveland beginning July 15, but according to press reports the hotels association has positively refused to negotiate or confer directly or indirectly with the unions. It appears that the places of the old employees were filled, at least partly, by July 21, the dispute as regards the workers having been unsuccessful.

Bituminous coal miners, West Virginia.—According to press reports, operations of the Kelly's Creek Colliery Co., at Ward, where a strike began August 21, were resumed with strike breakers after being closed for about three weeks, but the strike was not ended until October 6, when the strikers agreed to resume work on the company's terms.

Conciliation Work of the Department of Labor in September, 1930

By Hugh L. Kerwin, Director of Conciliation

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 60 labor disputes during September, 1930. These disputes affected a known total of 46,288 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On October 1, 1930, there were 37 strikes before the department for settlement and in addition 23 controversies which had not reached the strike stage. The total number of cases pending was 60.

LABOR DISPUTES HANDLED DURING THE MONTH OF SEPTEMBER, 1930

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Cloak makers, Los Angeles, Calif.	Threatened strike.	Cloak makers	Wages, hours, and recognition	Pending	1930 Aug. 29	1930	500	1,000
William Brown Hosiery Co., Philadelphia, Pa.	do	Hosiery workers	Refusal to sign agreement	Adjusted. Agreement modified and signed by all parties.	do	Sept. 10	700	
M. D. Laubach Hosiery Co., Philadelphia, Pa.	do	do	do	do	do	do	125	
Rialto and Embassy theaters, Lewistown, Pa.	Strike	Moving pictures	Wages and working conditions	Unclassified. Others employed	Sept. 1	Sept. 7	4	
Frank Desiderio & Sons, Newark and Whippany, N. J.	Lockout	Teamsters	Wage increase	Adjusted. Allowed increase of 30 to 40 per cent and recognition.	Aug. 25	Sept. 2	38	14
Johnson Bros., Newark and Whippany, N. J.	do	do	do	do	do	Aug. 29	10	5
Harry Hafel Co., Newark and Whippany, N. J.	Strike	do	do	do	do	Sept. 3	5	3
John W. Griffin & Son, Chicago, Ill.	do	Electricians	Failure to pay union wages	Adjusted. Union wages allowed; 5-year agreement concluded.	Aug. 15	Aug. 21	10	150
Children's dressmakers, New York City.	do	Dressmakers	Asked $2 per week increase for salaried and 10 per cent for piece workers.	Adjusted	Aug. 26	Sept. 4	1,200	
Deep Vein Coal Co., Princeton, Ind.	Controversy	Miners	Working conditions	Pending	Sept. 5		(1)	
Philadelphia & Reading Coal & Iron Co., Shamokin, Pa.	Strike	do	Wages and working conditions	Adjusted. Satisfactory agreement	Aug. 27	Sept. 4	900	10
Creighton and Capital theaters, Fort Wayne, Ind.	Lockout	Operators	Wages cut $5 per week; refusal to renew agreement.	Pending	Sept. 8		6	28
Kelley's Creek Coal Co., Ward, W. Va.	Strike	Miners	Wages cut about 10 per cent; hours.	Adjusted. Settled. (Terms not yet received.)	Aug. 21	Oct. 6	850	
High School and Kresge buildings, Providence, R. I.	do	Plumbers	Asked 5-day week and increase of 13 cents per hour—to $1.40.	Adjusted. Allowed 5-day week and $1.35 per hour	Sept. 1	Sept. 10	20	
American Plumbing Co., Providence, R. I.	do	do	do	Adjusted	do	Sept. 1	8	
Dupuis Plumbing Co., Pawtucket, R. I.	do	do	do	do	do	do	25	
Pacific National Theater Co., Bakersfield, Calif.	Lockout	Operators	Operation of curtain switch control.	Adjusted. Agreement renewed. No change in conditions.	do	Sept. 5	3	10
Highway builders, Mauch Chunk, Pa.	Strike	Cement handlers	Asked wage increase to 40 cents per hour.	Unclassified. Allowed 50 cents per hour; 5 men to do work formerly done by 8. (Settled before arrival of commissioner.)	Aug. 23	Aug. 26	8	
Granada Theater, Scranton, Pa.	Controversy	Stage employees	Working conditions	Pending		Sept. 8		

Granada Theater, Scranton, Pa.	Controversy	Stage employees	Working conditions	Pending	Sept. 8			
Pipe-line workers, Hamburg, Pa.	Strike	Pipe-line workers	Asked wage increase	Unclassified. Returned without change before commissioner arrived.	Sept. 3	Sept. 3	15	
Miners, Morgantown, W. Va.	do	Miners	Overtime work without extra pay.	Pending	Aug. 11		300	
Realart Hosiery Co., Philadelphia, Pa.	do	Hosiery workers	Wages and hours; company refused to sign agreement	Unable to adjust. Company continued to refuse to sign agreement.	Sept. 1	Sept. 18	44	
Building, Wheaton, Ill.	Controversy	Carpenters and lathers.	Jurisdiction	Pending	Aug. 26		(1)	
Sprayet Co., South Bend, Ind.	do	Metal workers	Day wages cut 15 per cent; piece work wages cut 25 per cent.	Adjusted. Company agreed to begin operating again at same wages before cut when business conditions warrant.	Sept. 11	Sept. 16	2	20
Neckwear workers, New York City.	Strike	Neckwear workers	Company refused to post bond guaranteeing fulfillment of agreement.	Adjusted. Bond posted; wages and hours satisfactory.	Sept. 3	Sept. 12	500	100
Clark-Court Printing Co., Galveston, Tex.	do	Bookbinders and lithographers.	Wages cut; nonunion shop conditions.	Pending	Sept. 10		26	50
Bell Telephone Company Building, Newark, N. J.	do	Carpenters and laborers.	Jurisdiction relative to nailing work.	Adjusted. Laborers will do no more nailing except to put planking together.	Sept. 15	Sept. 19	30	120
Sherman Coal Co., Pottsville, Pa.	do	Miners	Local union dispute	Adjusted. Satisfactorily arranged.	Sept. 12	Sept. 12	195	5
Kalamazoo Stove Co., Kalamazoo, Mich.	do	Molders	Trouble between union and nonunion men.	Unable to adjust. Others employed and plant operating to capacity.	Aug. 19	Oct. 9	300	100
Gorham Manufacturing Co., Providence, R. I.	do	Bronze workers	Wage cut	Unclassified. Forty returned; other places filled by new men.	Sept. 3	Sept. 10	60	
Longshoremen, New Orleans, La.	Controversy	Longshoremen	Wages and working conditions	Unclassified. Negotiations in other hands than this department.	Sept. 16	Sept. 25	7,500	
Majestic Theater, Williamsport, Pa.	Lockout	Projectionists	do	Adjusted. Agreement secured but men have not yet returned to work.	Sept. 8	Sept. 17	2	
Paramount Theater Building, Fort Wayne, Ind.	Threatened strike.	Painters	Hiring nonunion painters	Adjusted. All union painters employed.	Sept. 15	Sept. 16	20	128
Small theaters, Pittsburgh, Pa.	do	Operators	Reduction of force	Adjusted. Satisfactory agreement; all continued at work and back wages paid.	Sept. 8	Sept. 18	70	
Kondazian & Anderson, Watertown, Mass.	Strike	Clothing workers	Wages; right of employees to hold membership in Amalgamated Clothing Workers' Union.	Pending	Sept. 3		145	160
Furlong Boiler Works, Des Moines, Iowa.	do	Boilermakers	Company refused to permit union shop conditions.	Unable to adjust. Can do nothing at present.	June 28	Sept. 25	5	
Wm. H. Weiss, Co., Chicago, Ill.	do	Ladies' garment makers.	Wages, union recognition, and conditions.	Unable to adjust. Company discontinued manufacturing and entered jobbing business.	Sept. 4	Sept. 29	26	
Allegheny General Hospital, Pittsburgh, Pa.	do	Sheet metal and iron workers.	Jurisdiction of metal work	Unclassified. Mediation not practicable.	Sept. 14	Sept. 20	21	

[1] Not reported.

LABOR DISPUTES HANDLED DURING THE MONTH OF SEPTEMBER, 1930—Continued

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
					1930	1930		
Valley Camp Coal Co., Scotts Run, W. Va.	Strike	Miners	Working overtime without extra pay.	Adjusted. Conditions improved; men may return when needed.	Aug. 11	Sept. 11	300	50
Thos. A. Edison Shop, Newark, N. J.	Controversy	Metal polishers	Wages cut from 70 to 55 cents per hour.	Pending	Sept. 18		13	2,300
Woolworth Store, Mount Carmel, N. Y.	Strike	Clerks	Asked Wednesday half holiday	Adjusted. Returned; holiday not allowed.	do	Sept. 19	19	30
State Hospital Building, Fair View, Pa.	do	Carpenters	Wages 40 cents per hour below union scale.	Pending	Sept. 23		5	
Glen Alden Coal Co., Ashley, Pa.	do	Miners	Asked seniority rights for a wage worker.	Adjusted. Returned; officials to fix terms.	Sept. 16	Sept. 18	1,550	20
Riverside & Dan River Cotton Mills, Danville, Va.	do	Textile workers	Asked recognition, improved conditions, and reinstatement of those discharged.	Pending	Sept. 29		4,000	
Veteran's Bureau Hospital, Great Lakes, Ill.	Threatened strike.	Building	Objection to open-shop policy of contractor.	Unable to adjust. Contractor maintained open-shop conditions.	Sept. 24	Oct. 1	175	
School No. 6, Clifton, N. J.	Strike	do	Nonunion ironworkers employed.	Pending	Sept. 11		40	60
Astoria Silk Co., Long Island, N. Y.	do	Silk weavers	Wage increase asked	Unclassified. Returned without change before arrival of commissioner.	Sept. 10	Sept. 15	40	30
Blue Bird Silk Co., Paterson, N. J.	Strike	Weavers and warpers.	Wages cut 4 cents per yard for weaving.	Adjusted. Four-cent cut restored; allowed 8-hour day.	Sept. 15	Sept. 19	140	10
Beifield & Co., Philadelphia, Pa.	do	Upholsterers	Company refused to renew union agreement except with 15 per cent wage cut.	Pending	Sept. 17		20	
Standard Upholstering Co., Philadelphia, Pa.	do	do	do	do	do		15	
Tailors and dressmakers, New York City.	do	Dressmakers	Asked $3 per week increase	do	Sept. 25		2,500	15,000
Fishermen, Monterey, Calif.	do	Fishermen	Canners refused to pay $8 per ton for sardines.	Adjusted. Price fixed at $8 per ton; conditions improved.	Sept. 25	Sept. 30	800	1,000
Vogel Silk Works, Paterson, N. J.	do	Broad silk weavers	Working conditions	Pending	Sept. 9		13	
Sanitarium Building, Hamburg, Pa.	do	Building trades	(1)	do	Sept. 25		(1)	
Scranton, Montrose & Binghamton Railway Co., Scranton, Pa.	Threatened strike.	Street railway workers.	(1)	do	Sept. 24		(1)	
Millers Falls Tool Co., Greenfield, Mass.	Strike	Auger and bit makers.	Objection to point system and	Adjusted.	Returned without	Sept. 27	Oct. 2	20	

Millers Falls Tool Co., Greenfield, Mass.	Strike	Auger and bit makers.	Objection to point system and wage cut.	Adjusted. Returned without change.	Sept. 27	Oct. 2	20	.....
Columbia Silk Co., Paterson, N. J	....do	Silk weavers	Asked 1½ cents per yard increase for weaving and 8-hour day.	Adjusted. Allowed 1 cent per yard increase and 8-hour day.	Sept. 17	Sept. 19	16	34
Auto City Plating Co., Detroit, Mich.	Lockout	Metal polishers	Asked wage adjustment to $1 per hour.	Pending	Sept. 8	.....	18	1,200
Motor City Plating Works, Detroit, Mich.	....do	....do	....do	....do	....do	.....	30	1,200
Thos. W. Buck Hosiery Co., Philadelphia, Pa.	Strike	Hosiery workers	Company maintained shop at 15 per cent below union wage scale.	Adjusted. Agreed on union hours and wages except for a few styles.	July 30	Oct. 7	64	.....
Total							23,451	22,837

[1] Not reported.

LABOR TURNOVER

Labor Turnover in American Factories, September, 1930

THE Bureau of Labor Statistics presents herewith labor turnover indexes for the month of September for manufacturing as a whole and for eight separate manufacturing industries. The indexes for manufacturing as a whole are made up from reports received from representative manufacturing plants in over 75 industries employing nearly 1,500,000 people.

In the automotive industry the indexes are made from representative plants employing over 200,000 people. The plants reporting for the boot and shoe industry and those reporting for cotton manufacturing employ in each industry over 100,000 people. In foundries and machine shops nearly 175,000 people are employed by plants reporting to the bureau. In the furniture industry there were approximately 40,000 employees working for the firms from which the bureau receives reports. Firms in the iron and steel industry reporting turnover statistics to the bureau employ nearly 225,000 people, while those reporting in the sawmill industry employ between 60,000 and 70,000 people. Those reporting for slaughtering and meat packing employed between 70,000 and 80,000 people.

The forms of average used is the unweighted median of company rates. In determining a median rate the rates for the several establishments are listed in order from lowest to highest; the rate falling in the center of this arrangement of rates is the median. In other words, it is a rate which has as many rates above as below it. The number of employees used as a basis for computing these rates is the average number on the company pay rolls during the month of September. The bureau presents, in addition to the separation rate and the accession rate, the net turnover rate.

The net turnover rate means the rate of replacement. It is the number of positions that were vacated and filled per 100 employees. In a plant that is increasing its force the net turnover rate would be the same as the separation rate because while more people would be hired than quit, the number hired above those leaving would be due to expansion and could not be charged to turnover. On the other hand, in a plant that is reducing the number of its employees, the net turnover rate is the same as the accession rate, for while more people leave than are hired the excess of separations over accessions is due to a reduction of force and therefore could not logically be charged as a turnover expense.

The net turnover rate for all manufacturing industries has been the same as the accession rate since November, 1929.

Table 1 shows for all industries the total separation rate subdivided into the quit, discharge, and lay-off rates, together with the accession and the net turnover rates, presented both on a monthly and an equivalent annual basis.

TABLE 1.—AVERAGE LABOR-TURNOVER RATES IN SELECTED FACTORIES IN 75 INDUSTRIES [1]

A.—Monthly Rates

Month	Separation rates								Accession rate		Net turnover rate	
	Quit		Lay-off		Discharge		Total [1]					
	1929	1930	1929	1930	1929	1930	1929	1930	1929	1930	1929	1930
January	2.26	1.11	0.35	1.04	0.45	0.24	3.06	2.39	4.98	2.01	3.06	2.01
February	2.28	1.23	.36	1.06	.46	.25	3.20	2.53	4.36	2.06	3.20	2.06
March	3.12	1.38	.48	1.03	.57	.30	4.17	2.71	5.20	1.95	4.17	1.95
April	3.56	1.45	.45	1.16	.57	.27	4.58	2.88	5.77	2.00	4.58	2.00
May	3.46	1.50	.48	1.18	.48	.26	4.42	2.94	5.09	2.10	4.42	2.10
June	3.25	1.22	.44	1.12	.51	.20	4.20	2.54	5.01	1.62	4.20	1.62
July	3.03	1.00	.42	1.31	.49	.18	3.94	2.49	5.21	1.48	3.94	1.48
August	3.26	.95	.41	1.30	.45	.13	4.12	2.38	4.61	1.25	4.12	1.25
September	3.14	1.13	.52	1.18	.50	.16	4.16	2.47	4.91	1.82	4.16	1.82
October	2.42	------	.80	------	.40	------	3.62	------	3.91	------	3.62	------
November	1.59	------	1.26	------	.30	------	3.15	------	1.95	------	1.95	------
December	1.08	------	1.21	------	.20	------	2.49	------	1.24	------	1.24	------
Average	**2.71**	------	**.60**	------	**.45**	------	**3.76**	------	**4.35**	------	**3.76**	------

B.—Equivalent Annual Rates

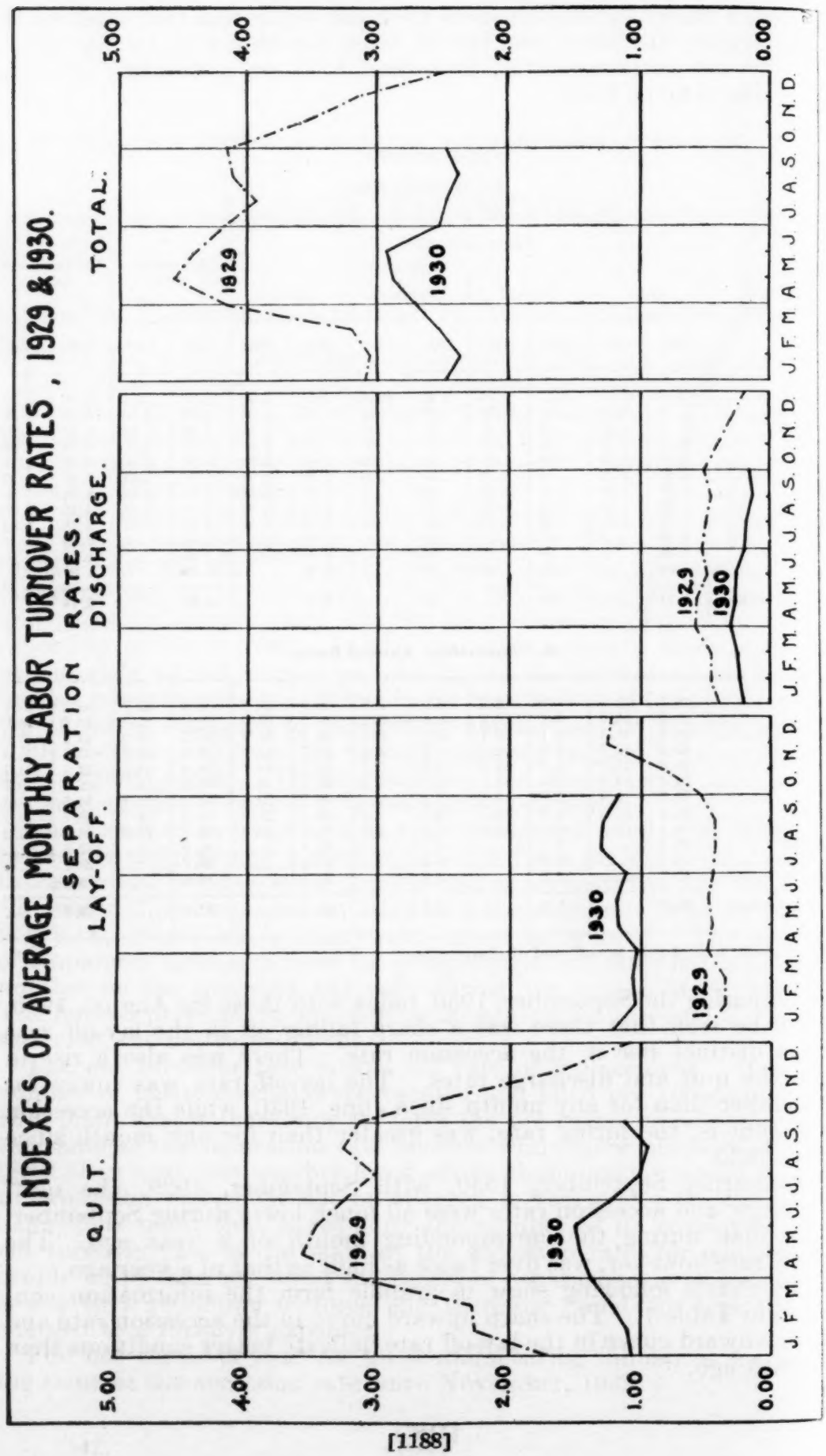
January	26.7	13.1	4.2	12.2	5.3	2.8	36.2	28.1	58.6	23.7	36.2	23.7
February	31.0	16.0	4.7	13.8	6.0	3.2	41.7	33.0	56.9	26.9	41.7	26.9
March	36.8	16.3	5.7	12.1	6.7	3.5	49.2	31.9	61.2	23.0	49.2	23.0
April	43.3	17.7	5.5	14.1	6.9	3.3	55.7	35.1	70.2	24.3	55.7	24.3
May	40.8	17.7	5.7	13.9	5.6	3.1	52.1	34.7	59.9	24.7	52.1	24.7
June	39.5	14.8	5.4	13.6	6.2	2.4	51.1	30.8	60.9	19.7	51.1	19.7
July	35.7	11.8	5.0	15.4	5.8	2.1	46.5	29.3	61.4	17.4	46.5	17.4
August	38.4	11.2	4.8	15.3	5.3	1.5	48.5	28.0	54.3	14.7	48.5	14.7
September	38.2	13.7	6.3	14.3	6.1	2.0	50.6	30.0	59.7	22.2	50.6	22.2
October	28.5	------	9.4	------	4.7	------	42.8	------	46.0	------	42.8	------
November	19.4	------	15.3	------	3.7	------	38.4	------	23.7	------	23.7	------
December	12.7	------	14.2	------	2.4	------	29.3	------	14.6	------	14.6	------
Average	**32.6**	------	**7.2**	------	**5.4**	------	**45.2**	------	**52.3**	------	**45.2**	------

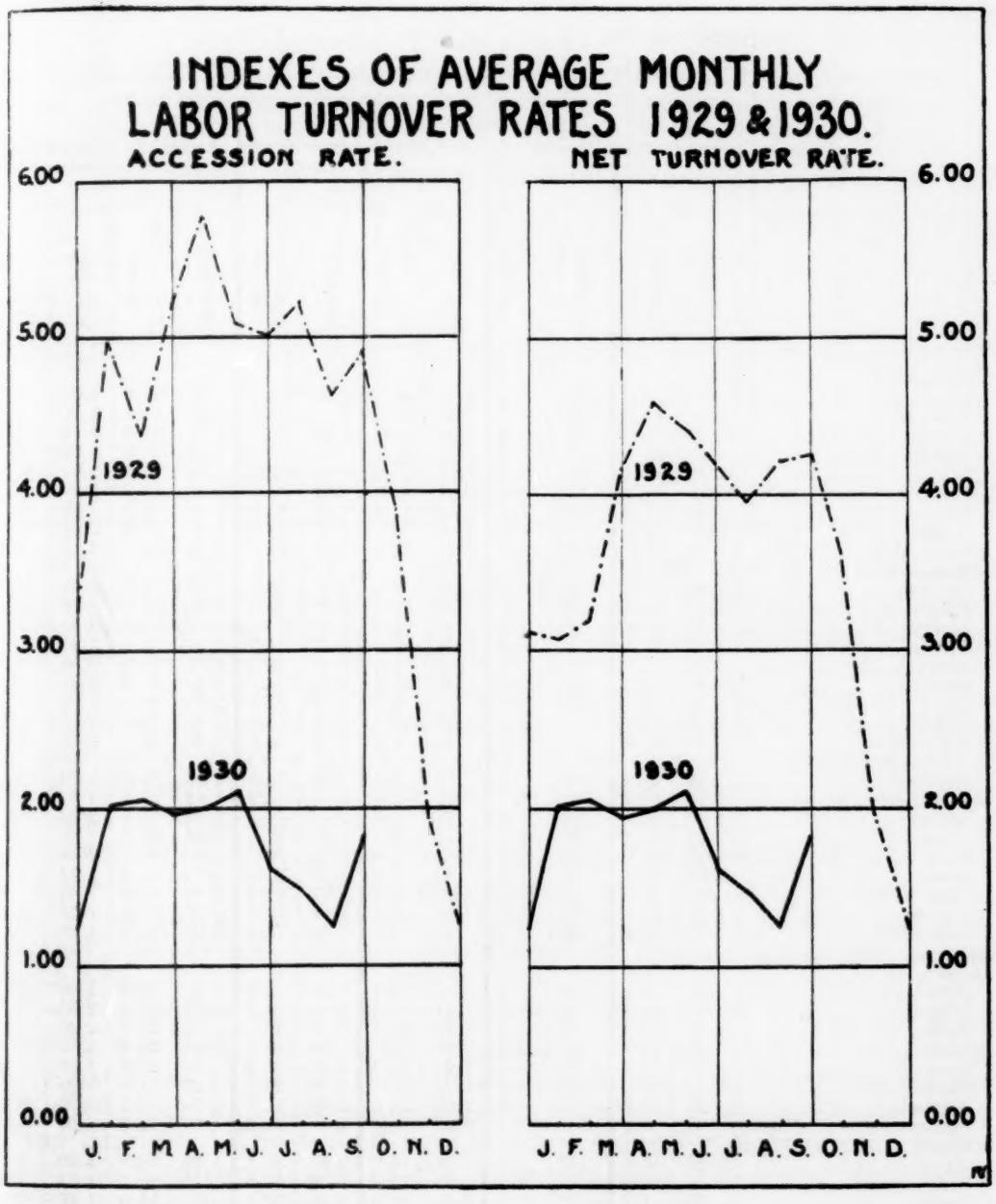
[1] Arithmetic sum of quit, lay-off, and discharge rates.

Comparing the September, 1930, index with those for August, 1930, it will be seen that there was a sharp falling off in the lay-off rate and a distinct rise in the accession rate. There was also a rise in both the quit and discharge rates. The lay-off rate was lower for September than for any month since June, 1930, while the accession rate, that is, the hiring rate, was greater than for any month since May, 1930.

Comparing September, 1930, with September, 1929, the quit, discharge, and accession rates were all much lower during September, 1930, than during the corresponding month of a year ago. The lay-off rate however, was over twice as high as that of a year ago.

The charts following show in graphic form the information contained in Table 1. The sharp upward curve in the accession rate and the downward curve in the lay-off rate indicate better conditions than a month ago.


INDEXES OF AVERAGE MONTHLY LABOR TURNOVER RATES, 1929 & 1930.
SEPARATION RATES.
QUIT.
LAY-OFF.
DISCHARGE.
TOTAL.
5.00
4.00
3.00
2.00
1.00
0.00
1929
1930
J F M A M J J A S O N D


INDEXES OF AVERAGE MONTHLY
LABOR TURNOVER RATES 1929 & 1930.
ACCESSION RATE.
NET TURNOVER RATE.
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1929
1930
J. F. M. A. M. J. J. A. S. O. N. D.

Turnover Indexes by Industries

TABLE 2 shows the quit, discharge, lay-off, accession, and net turnover rates for automobiles, boots and shoes, cotton manufacturing, iron and steel, sawmills, and slaughtering and meat packing for the months January to September, 1930, inclusive; for the foundry and machine shop industry for the months February to September, 1930, inclusive; and for the furniture manufacturing industry for the months April to September, 1930, inclusive, presented both on a monthly and an equivalent annual basis.

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES

Industry, year and month, 1930	Separation rates								Accession rates		Net turnover rate	
	Quits		Discharges		Lay-offs		Total					
	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual
Automobiles:												
January	1.27	15.0	0.59	7.0	2.22	26.2	4.08	48.2	8.20	96.9	4.08	48.2
February	1.10	14.3	.15	1.9	1.86	24.3	3.11	40.5	3.40	44.3	3.11	40.5
March	1.56	18.4	.42	4.9	1.95	23.0	3.93	46.3	5.31	62.6	3.93	46.3
April	1.84	22.4	.33	4.0	2.70	32.8	4.87	59.2	4.06	49.4	4.06	49.4
May	1.39	16.4	.27	3.2	3.68	43.3	5.34	62.9	2.74	32.3	2.74	32.3
June	1.17	14.2	.25	3.0	3.82	46.5	5.24	63.7	1.91	23.2	1.91	23.2
July	1.00	11.8	.10	1.2	4.53	53.4	5.63	66.4	1.39	16.4	1.39	16.4
August	1.02	12.0	.15	1.8	3.10	36.5	4.27	50.3	2.65	31.2	2.65	31.2
September	1.14	13.9	.16	2.0	3.60	43.8	4.90	59.7	2.70	32.9	2.70	32.9
Boots and shoes:												
January	1.51	17.8	.46	5.4	.28	3.3	2.25	26.5	5.26	61.9	2.25	26.5
February	1.23	16.0	.39	5.1	.72	9.4	2.34	30.5	2.06	26.9	2.06	26.9
March	1.56	18.4	.36	4.2	.44	5.2	2.36	27.8	2.79	27.8	2.36	27.8
April	1.73	21.1	.32	3.9	1.01	12.3	3.06	37.3	2.11	25.7	2.11	25.7
May	1.45	17.1	.25	2.9	.71	8.4	2.41	28.4	2.16	25.4	2.16	25.4
June	1.25	15.2	.32	3.9	.87	10.6	2.44	29.7	2.17	26.4	2.17	26.4
July	.96	11.3	.28	3.3	.75	8.8	1.99	23.4	2.50	29.5	1.99	23.4
August	1.32	15.5	.36	4.2	1.33	15.7	3.01	35.4	2.53	29.8	2.53	29.8
September	1.46	17.8	.25	3.0	.81	9.8	2.52	30.6	1.98	24.1	1.98	24.1
Cotton manufacturing:												
January	1.20	14.2	.11	1.3	.29	3.4	1.60	18.9	2.40	28.3	1.60	18.9
February	1.20	15.6	.19	2.5	.14	1.8	1.53	19.9	1.62	21.1	1.53	19.9
March	1.59	18.7	.28	3.3	.25	2.9	2.12	24.9	2.53	29.8	2.12	24.9
April	1.34	16.3	.09	1.1	.14	5.4	1.87	22.8	2.34	28.5	1.87	22.8
May	1.40	16.5	.20	2.3	.59	6.9	2.19	25.7	2.25	26.5	2.19	25.7
June	1.04	12.6	.16	1.9	.90	11.0	2.10	25.5	1.75	21.3	1.75	21.3
July	.95	11.2	.11	1.3	.67	7.9	1.73	20.4	1.44	17.0	1.44	17.0
August	1.00	11.8	.14	1.6	.84	9.9	1.98	23.3	1.37	16.1	1.37	16.1
September	.95	11.5	.09	1.1	.47	5.7	1.50	18.3	2.06	25.1	1.50	18.3
Foundries and machine shops:												
February	.77	10.1	.05	.7	.80	10.4	1.62	21.2	2.26	29.5	1.62	21.2
March	1.12	13.2	.16	1.9	1.21	14.2	2.49	29.3	2.33	27.4	2.33	27.4
April	1.26	15.3	.09	1.1	1.12	13.6	2.47	30.0	2.42	29.5	2.42	29.5
May	1.23	14.5	.25	2.9	1.88	22.1	3.36	39.5	1.83	21.6	1.83	21.6
June	.76	9.3	.15	1.8	1.99	24.2	2.90	35.3	1.30	15.8	1.30	15.8
July	.54	6.4	.16	1.9	1.79	21.1	2.49	29.4	1.23	14.5	1.23	14.5
August	.53	6.2	.13	1.5	2.00	23.6	2.66	31.3	1.04	12.2	1.04	12.2
September	.49	6.0	.08	1.0	2.00	24.3	2.57	31.3	1.00	12.2	1.00	12.2
Furniture:												
April	1.22	14.8	.10	1.2	1.29	15.7	2.61	31.7	1.33	16.2	1.33	16.2
May	.76	8.9	.23	2.7	2.01	23.7	3.00	35.3	1.15	13.5	1.15	13.5
June	.39	4.7	.13	1.6	2.38	28.9	2.90	35.2	1.07	13.0	1.07	13.0
July	.42	4.9	.20	2.4	1.32	15.5	1.94	22.8	1.59	18.7	1.59	18.7
August	.62	7.3	.22	2.6	.76	8.9	1.60	18.8	2.01	23.7	1.60	18.8
September	.35	4.2	.19	2.3	.70	8.5	1.24	15.0	2.70	32.9	1.24	15.0
Iron and steel:												
January	1.37	16.1	.23	2.8	1.63	19.2	3.23	38.1	3.87	45.6	3.23	38.1
February	1.07	14.0	.18	2.4	.74	9.7	1.99	26.1	2.97	38.7	1.99	26.1
March	1.35	15.9	.20	2.3	.45	5.3	2.00	23.5	2.54	29.9	2.00	23.5
April	1.51	18.4	.19	2.3	.30	3.7	2.00	24.4	2.43	29.6	2.00	24.4
May	1.40	16.5	.17	2.0	.87	10.3	2.44	28.8	2.06	24.3	2.06	24.3
June	1.36	16.6	.23	2.8	.64	7.8	2.23	27.2	2.38	28.9	2.23	27.2
July	.90	10.6	.15	1.8	.73	8.6	1.78	21.0	1.37	16.1	1.37	16.1
August	.95	11.2	.11	1.3	1.13	13.3	2.19	25.8	1.15	13.6	1.15	13.6
September	1.07	13.0	.09	1.1	1.00	12.2	2.16	26.3	1.32	16.1	1.32	16.1

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES—Contd.

Industry, year and month, 1930	Separation rates								Accession rates		Net turnover rate	
	Quits		Discharges		Lay-offs		Total					
	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual
Saw mills:												
January	1.57	18.5	0.44	5.2	1.77	20.9	3.78	44.6	2.54	29.9	2.54	29.9
February	1.77	23.1	.18	2.4	1.81	23.6	3.76	49.1	4.38	57.1	3.76	49.1
March	1.90	22.4	.11	1.3	1.10	13.0	3.11	36.7	4.86	57.2	3.11	36.7
April	1.62	19.7	.19	2.3	1.21	14.7	3.02	36.7	4.46	54.3	3.02	36.7
May	1.33	15.7	.11	1.3	1.46	17.2	2.90	34.2	3.48	41.0	2.90	34.2
June	1.10	13.4	.23	2.8	2.16	26.3	3.49	42.5	2.78	33.8	2.78	33.8
July	.82	9.6	.24	2.8	2.28	26.9	3.34	39.3	3.65	43.0	3.34	39.3
August	.67	7.9	.26	3.1	2.34	27.6	3.27	38.6	2.04	24.1	2.04	24.1
September	1.52	18.5	.16	2.0	2.67	32.5	4.35	53.0	3.07	37.4	3.07	37.4
Slaughtering and meat-packing:												
January	1.60	18.9	.51	6.0	1.52	17.9	3.63	42.8	4.08	48.1	3.63	42.8
February	1.54	20.1	.45	5.9	4.33	56.5	6.32	82.5	2.92	38.2	2.92	38.1
March	1.89	22.3	.48	5.6	2.62	30.9	4.99	58.8	2.84	33.5	2.84	33.5
April	1.90	23.1	.46	5.6	1.91	23.3	4.27	52.0	4.28	52.1	4.27	52.0
May	2.38	28.0	.54	6.4	1.52	17.9	4.44	52.3	6.10	71.9	4.44	52.3
June	2.12	25.8	.44	5.3	1.13	13.7	3.69	44.8	6.12	74.4	3.69	44.8
July	1.52	17.9	.48	5.7	2.90	34.1	4.90	57.7	4.80	56.5	4.80	56.5
August	1.32	15.6	.36	4.2	1.35	15.9	3.03	35.7	3.66	43.1	3.03	35.7
September	1.85	22.5	.35	4.3	1.41	17.2	3.61	44.0	5.38	65.5	3.61	44.0

The September accession rate for automobiles was 2.70, compared with a total separation rate of 4.90. The quit, discharge, lay-off, and accession rates were all higher in the automotive industry for September than for August.

In the boot and shoe industry the September total separation rate was 2.52, while the September accession rate was 1.98. Comparing the September rates with the August rates we find the quit rate was higher this month than last month, while the discharge, lay-off, and accession rates were all lower.

The accession rate in the cotton manufacturing industry was 2.06, compared with a total separation rate of 1.50. The quit, discharge, and lay-off rates were all lower than those of one month ago. In contrast, the accession rate was distinctly higher than that of one month ago.

The September accession rate for the foundry and machine-shop industry was 1.00. The total separation rate was 2.57. Comparing the September turnover rates with the August turnover rates, the quit, discharge, and accession rates were lower during September than during August. The lay-off rate was the same for each month.

For the furniture industry the accession rate was more than twice as high as the total separation rate. The September accession rate was 2.70, while the total separation rate in this industry was 1.24. The September quit, discharge, and lay-off rates were all lower than during August. The September accession rate was higher than the August accession rate.

In the iron and steel industry the total separation rate for September was 2.16. The accession rate was 1.32. The quit and accession rates were higher for September than for August, while the discharge and lay-off rates were lower for September than for August.

The accession rate in the sawmill industry was 3.07, while the total separation rate was 4.35. The September quit, lay-off, and accession rates were higher than the August quit, lay-off, and accession rates. The September discharge rate was lower than the August discharge rate.

In the slaughtering and meat-packing industry the accession rate for September was 5.38 and the total separation rate was 3.61. Comparing September with August, the quit, lay-off, and accession rates were all higher than for a month ago. The discharge rate was slightly lower than for a month ago.

The quit rate for automobiles, boots and shoes, sawmills, and slaughtering and meat packing was higher than the quit rate for all industries. Cotton manufacturing, foundries and machine shops, furniture, and iron and steel had a lower quit rate than the average for all industries.

The discharge rate for all manufacturing industries was 0.16. The discharge rate for boots and shoes and slaughtering and meat packing exceeded this rate. Automobiles and sawmills had the same discharge rate as was that for all industries. Cotton manufacturing, foundries and machine shops, and iron and steel had a lower discharge rate than that for all industries.

Automobiles, foundries and machine shops, sawmills, and slaughtering and meat packing showed a higher lay-off rate than that shown by manufacturing as a whole. The lay-off rate for boots and shoes, cotton manufacturing, furniture, and iron and steel is lower than that shown by manufacturing as a whole.

Automobiles, boots and shoes, cotton manufacturing, furniture, sawmills, and slaughtering and meat packing all had a higher accession rate than the all-industry accession rate. Foundries and machine shops and iron and steel showed a lower accession rate than the all-industry rate.

The highest quit rate, 1.85, was shown in the slaughtering and meat-packing industry; the lowest, 0.35, in the furniture industry. Slaughtering and meat packing also had the higher discharge rate, 0.35. The lowest discharge rate was in the foundry and machine-shop industry, 0.08. The automotive industry showed the highest lay-off rate during September. The lay-off rate for this industry was 3.60. Cotton manufacturing, with a rate of 0.47, showed the lowest lay-off rate for the month of September. The highest accession rate, 5.38, was shown by the slaughtering and meat-packing industry. The lowest, 1.00, was shown for the foundry and machine-shop industry.

HOUSING

Building Permits in Principal Cities, September, 1930

THE Bureau of Labor Statistics has received reports of building permits issued from 291 identical cities having a population of 25,000 or over for the months of August and September, 1930, and from 279 identical cities for the months of September, 1929, and September, 1930. These reports cover the corporate limits of the cities enumerated; hence, the cost figures presented in the following tables cover erection costs of building operations in the corporate limits of the cities. No land costs are included.

The States of Illinois, Massachusetts, New Jersey, New York, and Pennsylvania, through their Departments of Labor, are cooperating with the Bureau of Labor Statistics in the collection of these data.

Table 1 shows the estimated cost of new residential buildings, of new nonresidential buildings, and of total building operations in 291 cities of the United States, by geographic divisions.

TABLE 1.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL BUILDING OPERATIONS IN 291 CITIES OF THE UNITED STATES HAVING A POPULATION OF 25,000 OR OVER, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings					
	August, 1930	September, 1930	August, 1930	September, 1930	August, 1930	September, 1930	August, 1930	September, 1930
New England	$3,472,870	$3,059,125	527	530	$10,325,165	$4,076,009	$15,891,161	$9,231,204
Middle Atlantic	25,026,165	23,021,783	4,009	4,229	17,736,431	28,273,341	49,428,217	58,571,450
East North Central	8,734,988	12,369,246	1,472	1,618	15,546,644	19,035,718	27,845,798	36,093,956
West North Central	1,846,002	2,272,330	536	674	3,649,634	3,663,327	6,878,806	6,972,982
South Atlantic	3,158,914	1,754,136	638	439	4,604,460	3,012,796	9,599,466	6,775,305
South Central	3,142,051	3,130,226	927	923	7,530,679	6,580,030	11,980,116	10,895,701
Mountain and Pacific	6,223,983	7,166,728	1,966	2,202	7,661,687	8,989,044	16,532,241	19,207,772
Total	51,604,973	52,773,574	10,075	10,615	67,054,700	73,630,265	138,155,805	147,748,370
Per cent of change		+2.3		+5.4		+9.8		+6.9

Total estimated expenditures for all building operations during the month of September, 1930, in these 291 cities was $147,748,370—an increase of 6.9 per cent over the estimated cost of building operations for which permits were issued in these cities during the month of August.

Estimated costs of new residential buildings increased 2.3 per cent and estimated costs of new nonresidential building 9.8 per cent, comparing September permits with August permits.

In the new buildings for which permits were issued during September 10,615 family dwelling units are to be provided. This is an increase of 5.4 per cent over the 10,075 families provided for by the new dwellings for which permits were issued during August.

Increases in total building operations were shown in the Middle Atlantic States, the East North Central States, the West North Central States, and the Mountain and Pacific States. Decreases were shown in the New England States, South Atlantic States, and the South Central States. Increases in residential building were registered in the East North Central States, the West North Central States, and the Mountain and Pacific States. Decreases were shown in other geographic divisions in this class of building. There were increases in new nonresidential buildings in the Middle Atlantic States, the East North Central States, the West North Central States, and the Mountain and Pacific States. The number of families provided for increased in every district except the South Atlantic and the South Central.

Table 2 shows the estimated cost of additions, alterations, and repairs as shown by permits issued, together with the percentage of increase or decrease in September, 1930, as compared with August, 1930, in 291 cities; and in September, 1930, as compared with September, 1929, in 279 cities, by geographic divisions.

TABLE 2.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN CITIES OF THE UNITED STATES HAVING A POPULATION OF 25,000 OR OVER, BY GEOGRAPHIC DIVISIONS

Geographic division	Estimated cost in—				Per cent of increase or decrease, September, 1930—	
	279 cities		291 cities			
	September, 1929	September, 1930	August, 1930	September, 1930	Compared with September, 1929	Compared with August, 1930
New England	$2,516,111	$2,096,070	$2,093,126	$2,096,070	−16.7	+0.1
Middle Atlantic	8,290,430	7,204,891	6,665,621	7,276,326	−13.1	+9.2
East North Central	9,523,939	4,628,941	3,564,166	4,688,992	−51.4	+31.6
West North Central	2,245,046	1,037,325	1,383,170	1,037,325	−53.8	−25.0
South Atlantic	1,853,900	1,997,973	1,836,092	2,008,373	+7.8	+9.4
South Central	1,110,247	936,576	1,307,386	1,185,445	−15.6	−9.3
Mountain and Pacific	3,412,657	3,043,623	2,646,571	3,052,000	−10.8	+15.3
Total	28,952,330	20,945,399	19,496,132	21,344,531	−27.7	+9.5

Permits were issued during the month of September, 1930, for additions, alterations, and repairs to old buildings to cost $21,344,531, in the 291 cities from which reports were received for both August and September, 1930. This is an increase of 9.5 per cent over the estimated cost of repairs and additions for which permits were issued during the month of August.

Comparing September, 1930, with August, 1930, there were increases in estimated expenditures for repairs in all geographic divisions except the West North Central and the South Central. These increases ranged from one-tenth of 1 per cent in the New England to 31.6 per cent in the East North Central States.

In the 279 cities for which reports were received for both September, 1929, and September, 1930, there was a decrease of 27.7 per cent, comparing the latter period with the former.

Comparing September, 1930, with September, 1929, there were decreases in all districts except the South Atlantic States. These decreases ranged from 10.8 per cent in the Mountain and Pacific States to 53.8 per cent in the West North Central States. There was an increase of 7.8 per cent in the South Atlantic States.

Table 3 shows the index numbers of families provided for and the index numbers of indicated expenditures for residential buildings; for nonresidential buildings; for alterations and repairs; and for total building operations. These indexes are worked on the chain system with the monthly average of 1929 equaling 100.

TABLE 3.—INDEX NUMBER OF FAMILIES PROVIDED FOR AND OF ESTIMATED COSTS OF BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN CITIES OF THE UNITED STATES HAVING A POPULATION OF 25,000 OR OVER

[Monthly average 1929=100]

Month	Families provided for	Residential buildings	Nonresidential buildings	Additions, alterations, and repairs	Total cost all building operations
1929					
September	70.2	63.7	81.3	95.0	73.7
October	64.4	61.6	107.9	115.2	85.7
November	51.7	44.8	89.6	95.2	68.1
December	35.9	30.2	74.3	66.1	51.7
1930					
January	34.2	29.4	64.3	55.1	46.1
February	43.0	34.7	51.8	57.5	44.1
March	57.1	47.2	87.1	77.5	66.4
April	62.0	51.0	100.1	81.8	73.8
May	59.6	48.5	90.7	84.5	69.3
June	54.4	45.1	82.5	74.6	63.3
July	49.9	44.1	86.7	77.4	64.8
August	48.7	43.4	67.2	58.6	54.4
September	51.3	44.4	73.8	64.2	58.2

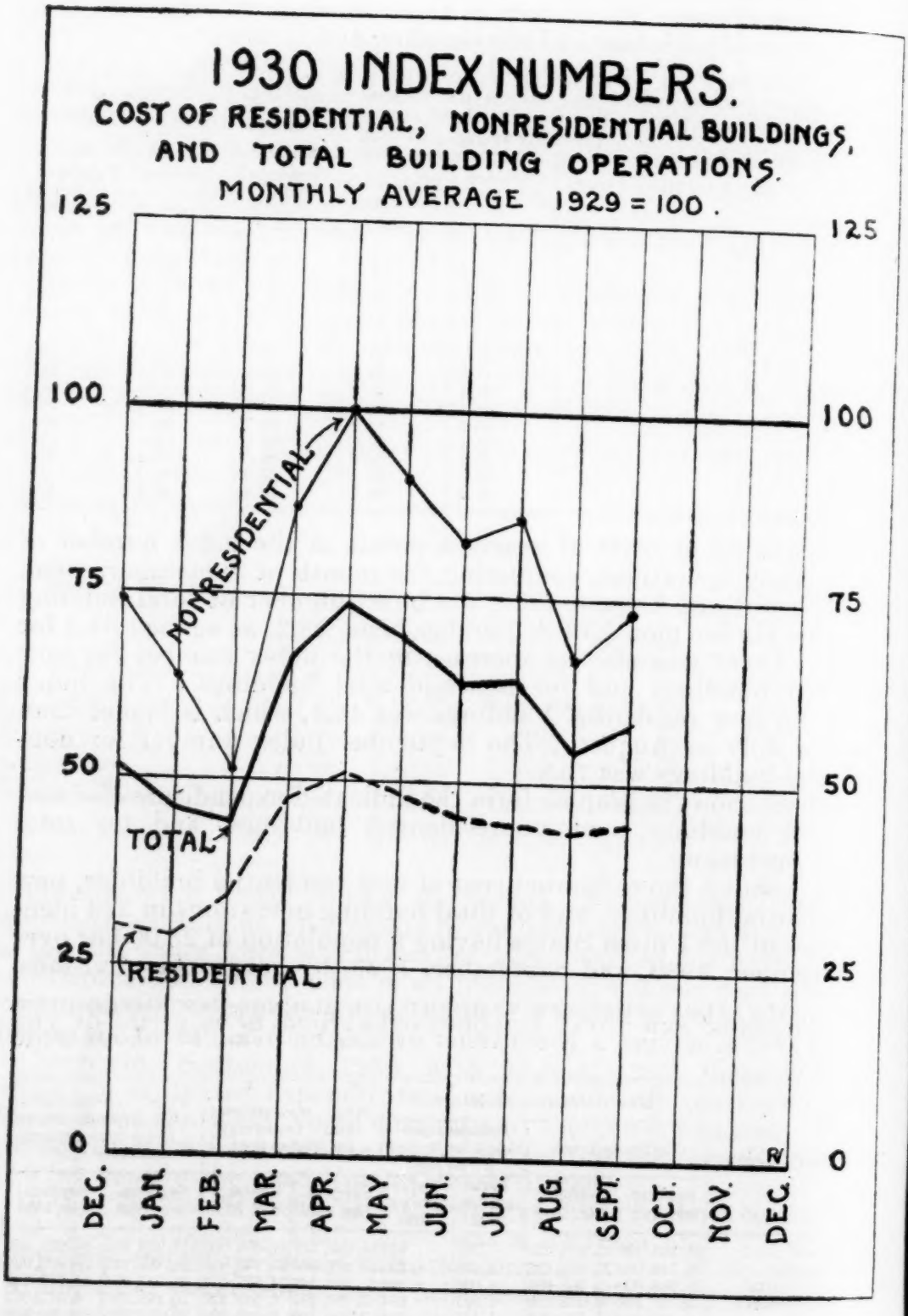
There was an increase of nearly 4 points in the index number of total building operations, comparing the month of September, 1930, with the month of August, 1930, the index number of total building operations for the month of September being 58.2, as against 54.4 for August. There was also an increase in the index number for new residential buildings and for nonresidential buildings. The index number for new residential buildings was 44.4, which is higher than for either July or August. The September index number for nonresidential buildings was 73.8.

The chart shows in graphic form the indicated expenditures for new residential buildings, new nonresidential buildings, and for total building operations.

Table 4 shows the estimated cost of new residential buildings, new nonresidential buildings, and of total building operations in 279 identical cities of the United States having a population of 25,000 or over for September, 1930, and September, 1929, by geographic divisions.

TABLE 4.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL BUILDING OPERATIONS IN 279 CITIES OF THE UNITED STATES HAVING A POPULATION OF 25,000 OR OVER, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings					
	September, 1929	September, 1930	September, 1929	September, 1930	September, 1929	September, 1930	September, 1929	September, 1930
New England	$6,363,100	$3,059,125	707	530	$4,399,719	$4,076,009	$13,278,930	$9,231,204
Middle Atlantic	24,749,950	22,976,783	3,426	4,220	35,827,537	28,240,951	68,867,917	58,422,625
East North Central	20,088,029	12,263,096	4,026	1,595	21,333,446	18,827,075	50,945,414	35,719,112
West North Central	3,518,369	2,272,330	1,011	674	5,236,282	3,663,327	10,999,697	6,972,982
South Atlantic	5,412,990	1,732,636	1,127	434	3,265,180	3,009,896	10,532,070	6,740,505
South Central	5,960,841	2,122,701	1,009	688	4,979,489	5,319,095	12,050,577	8,378,372
Mountain and Pacific	8,574,397	7,147,428	2,382	2,198	8,956,409	8,985,119	20,943,463	19,176,170
Total	74,667,676	51,574,099	13,688	10,339	83,998,062	72,121,472	187,618,068	144,640,970
Per cent of change		−30.9		−24.5		−14.1		−22.9


1930 INDEX NUMBERS.
COST OF RESIDENTIAL, NONRESIDENTIAL BUILDINGS, AND TOTAL BUILDING OPERATIONS.
MONTHLY AVERAGE 1929 = 100.
125
100
75
50
25
0
NONRESIDENTIAL
TOTAL
RESIDENTIAL
DEC.
JAN.
FEB.
MAR.
APR.
MAY
JUN.
JUL.
AUG.
SEPT.
OCT.
NOV.
DEC.

Comparing permits issued in September, 1930, with those issued in September, 1929, there was a decrease of 22.9 per cent in total building operations; a decrease of 30.9 per cent in new residential buildings; and a decrease of 14.1 per cent in new nonresidential buildings. The number of families provided for decreased 24.5 per cent.

There were decreases in total building operations in all geographic divisions. There were also decreases in residential building in all geographic divisions, and in new nonresidential building in all geographic divisions except the South Central and the Mountain and Pacific.

Table 5 shows the estimated costs of new residential and new nonresidential buildings, total building operations (including alterations and repairs), and the number of families provided for in each of the 291 cities from which reports were received for both August and September.

Totals and percentages of increase or decrease in expenditures for each class of building and for families provided for are shown by geographic divisions.

Reports were received from 48 cities in the New England States, 64 cities in the Middle Atlantic States, 73 cities in the East North Central States, 24 cities in the West North Central States, 31 cities in the South Atlantic States, 24 cities in the South Central States, and 27 cities in the Mountain and Pacific States for August and September, 1930.

New England States

THERE was a decrease of 41.9 per cent in total building operations as shown by permits issued during September compared with those issued during August. Permits issued for new residential buildings showed a decrease of 11.9 per cent. Those issued for new nonresidential buildings showed a decrease of 60.5 per cent. The number of families provided for in new dwellings showed an increase of six-tenths of 1 per cent, comparing September with August. September permits showed increases in total building operations in the cities of Meriden, Everett, Malden, Springfield, and Cranston. Decreases in total building operations were shown in Hartford, New Haven, Cambridge, Boston, Pawtucket, and Providence.

The decreases in nonresidential buildings in this district was largely accounted for by the decreases in New Haven, Conn. During August a permit was issued for a large building at Yale University which raised the expenditures for nonresidential buildings in this city to an abnormally high amount.

Permits were issued during September for the following large buildings in New England cities: In Boston, Mass., a permit was issued for a municipal bathhouse to cost $300,000. In Cambridge permits were issued for school dormitories to cost over $400,000. In Everett, Mass., a permit was issued for a hospital to cost $327,000; in New Bedford a permit was issued for a school building to cost nearly $250,000; and in Springfield a permit was issued for a hospital to cost $575,000.

No report was received from New London, Conn.

Comparing permits issued during September, 1930, with those issued during September, 1929, it is found that there was a decrease of 30.5 per cent in total building operations; a decrease of 51.9 per cent

in new residential buildings; and a decrease of 7.4 per cent in new nonresidential buildings. Families provided for in new dwelling houses decreased 25 per cent.

Middle Atlantic States

IN THE Middle Atlantic States there was an increase of 18.5 per cent in the total building operations, comparing September with August, 1930. While new residential buildings showed a decrease of 8 per cent, new nonresidential buildings showed an increase of 59.4 per cent. Family dwelling places provided for in the new buildings for which permits were issued during September increased 5.5 per cent over those provided for in the new buildings for which permits were issued during August.

Large increases in total building operations were shown in the cities of East Orange, Jersey City, Newark, Passaic, Albany, Buffalo, the Borough of Queens, Rochester, Philadelphia, and Williamsport. Large decreases were registered in the cities of Trenton, Schenectady, Yonkers, Pittsburgh, and Scranton.

A permit was issued for a telephone exchange building in East Orange to cost nearly $400,000. In Jersey City permits were issued for three public utilities buildings to cost $3,200,000. In Newark a permit was issued for a school building to cost $192,000 and in Passaic for an office building to cost $787,000. A permit was issued for a school building in Albany to cost $1,100,000. In Buffalo permits were issued for factory buildings to cost over $1,700,000. In Auburn a permit was issued for a 1-family residence to cost $300,000. In the Borough of the Bronx permits were issued for multifamily dwellings to cost nearly $3,000,000, and in Brooklyn for multifamily dwellings to cost $3,500,000. In the Borough of Manhattan the Federal Government let a contract for a new assay office to cost $1,750,000. Permits were issued in Manhattan for factory buildings to cost $3,200,000 and for apartment houses to cost over $4,000,000. Permits were issued for public-school buildings in Niagara Falls to cost over $650,000 and for one in Rochester to cost over $550,000. In Philadelphia a permit was issued for a public utilities building to cost $1,680,000, and for an office building to cost nearly $1,000,000.

No reports were received from Hazleton and Reading, Pa.

Comparing September, 1930, with September, 1929, it is found that according to permits issued in the Middle Atlantic States, there was a decrease of 7.2 per cent in new residential buildings; 21.2 per cent in new nonresidential buildings; and 15.2 per cent in total building operations. The number of families provided with dwelling places in new buildings increased 23.2 per cent.

East North Central States

IN THE East North Central States there was an increase of 29.6 per cent in total building operations, comparing permits issued in September, 1930, with those issued during August. There was an increase in both new residential buildings and new nonresidential buildings. The increase in the former class of buildings was 41.6 per cent, and in the latter class was 22.4 per cent. Families provided with dwelling places in new buildings increased 9.9 per cent in this geographic division. Increases in total building operations were registered in

Chicago, Peoria, Fort Wayne, Detroit, Hamtramck, Cleveland, Toledo, and Milwaukee. Decreases were registered in Aurora, Joliet, East Chicago, Indianapolis, Flint, Cincinnati, and Superior.

In Chicago permits were issued for a factory building to cost over $6,000,000; for two apartment houses to cost over $1,300,000; for two hotels to cost over $1,500,000; and for a Y. M. C. A. building to cost nearly $2,000,000. In Detroit permits were issued for two public-school buildings to cost over $1,500,000 and for factory buildings to cost nearly $1,000,000. In Hamtramck a school building is to be erected to cost over $800,000. In Cleveland a permit was issued for a theater building to cost $2,500,000.

No reports were received from Anderson and South Bend, Ind.; Battle Creek and Port Huron, Mich.; and Zanesville, Ohio.

There was a decrease of 39 per cent in new residential buildings in the East North Central States, comparing permits issued during September, 1930, with those issued during September, 1929. New nonresidential buildings decreased 11.7 per cent and total building operations decreased 29.9 per cent. The number of families provided with dwelling places in new buildings decreased 60.4 per cent, comparing September, 1930, with September, 1929.

West North Central States

THERE was an increase in all classes of building and in the number of families provided for in the West North Central States, comparing permits issued in September, 1930, with those issued in August. New residential buildings increased 23.1 per cent; new nonresidential buildings, four-tenths of 1 per cent; and total building operations, 1.4 per cent. Families provided with dwelling places in the new structures for which permits were issued increased 25.7 per cent, comparing September with August.

There was an increase in total building operations in Sioux City, Minneapolis, St. Paul, St. Joseph, and St. Louis. Decreases in total building operations were registered in Des Moines, Topeka, Wichita, Omaha, and Sioux Falls.

Permits were issued for a number of large public-school buildings in the West North Central States. In St. Joseph a permit was issued for a school building to cost $597,000; in St. Louis for one to cost $100,000; in Minneapolis for one to cost $315,000; and in St. Paul for one to cost $283,000. A permit was issued for a public utilities building in Duluth to cost nearly $325,000 and for two office buildings in Minneapolis to cost over $300,000.

Comparing permits issued in September, 1930, with those issued in September, 1929, there was a decrease of 35.4 per cent in estimated expenditures for new residential buildings; a decrease of 30 per cent in estimated expenditures for new nonresidential buildings; and a decrease of 36.6 per cent in estimated expenditures for total building operations. Families provided with dwelling places in new buildings decreased 33.3 per cent, comparing September, 1930, with September, 1929.

South Atlantic States

ACCORDING to permits issued in the South Atlantic States there was a decrease of 29.4 per cent in total building operations, comparing September, 1930, with August. Residential building decreased 44.5 per

cent and new nonresidential building decreased 34.6 during the same period. Dwelling units in new buildings decreased 31.2 per cent, comparing September with August.

Increases in total building operations were registered in Jacksonville, Atlanta, Greenville, Portsmouth, and Wheeling. Decreases were registered in Washington, Savannah, Winston-Salem, Norfolk, and Richmond. In Baltimore a permit was issued for a nurses' hall at the city hospital to cost $700,000. In Wheeling a permit was issued for an office building to cost $222,000. In Atlanta a public building was to be erected to cost $104,000.

No reports were received from Pensacola, Fla.; Spartanburg, S. C.; Lynchburg, Va.; and Charleston, W. Va.

Comparing building permits issued in this geographic division during September, 1930, with those issued during September, 1929, there was a decrease of 36 per cent in total building operations; a decrease of 68 per cent in new residential buildings; a decrease of 7.8 per cent in new nonresidential buildings; and a decrease of 61.5 per cent in the number of new family dwelling units provided in new buildings.

South Central States

PERMITS issued during September, 1930, in the South Central States showed a decrease of 9.1 per cent in total building operations as compared with the permits issued during August. There was a decrease of four-tenths of 1 per cent in new residential building and a decrease of 12.6 per cent in new nonresidential building. Families provided for decreased four-tenths of 1 per cent.

Large increases in total building operations, comparing September with August, were shown in Montgomery, Tulsa, Knoxville, Beaumont, Houston, and San Antonio. Large decreases were registered in the following cities in this district: Little Rock, Baton Rouge, New Orleans, Oklahoma City, Nashville, and Fort Worth.

In Oklahoma City a permit was issued for a hospital building to cost $100,000. In Tulsa a contract was let by the Federal Government for an extension to the post office and Federal court building to cost over $600,000. In Beaumont, Tex., a permit was issued for a county courthouse to cost over $650,000. In Dallas permits were issued for office buildings to cost over $1,250,000. In Fort Worth permits were issued for the erection of four bridges to cost $681,000.

No reports were received from Birmingham, Ala.; Fort Smith, Ark.; Covington, Ky.; Muskogee, Okla.; and Austin, El Paso, Galveston, Laredo, and Port Arthur, Tex.

There was a decrease of 30.5 per cent in total building operations in the South Central States, comparing September, 1930, with September, 1929. New residential buildings decreased 64.4 per cent. In contrast, new nonresidential buildings increased 6.8 per cent. There was a decrease of 31.8 per cent in new family dwelling places.

Mountain and Pacific States

IN THE Mountain and Pacific States there was an increase of 15.1 per cent in new residential buildings; an increase of 17.3 per cent in new nonresidential buildings; and an increase of 16.2 per cent in total building operations, comparing September, 1930, permits with August permits.

There was also an increase of 12 per cent in the number of families provided with dwelling places in new buildings. The cities of Tucson, Berkeley, Long Beach, San Francisco, Denver, and Portland showed large increases in total building operations, comparing September, 1930, with August. The cities of Oakland, Stockton, Great Falls, Seattle, and Spokane showed decreases in total building operations.

Permits were issued for factory buildings in Long Beach to cost nearly $700,000 and for a school building in the same city to cost $200,000. In Los Angeles permits were issued for office buildings to cost over $800,000. In Denver, Colo., a permit was issued for a school building to cost $360,000; in Portland, Oreg., store buildings were to be erected to cost nearly $200,000, according to permits issued during the month of September.

No report was received from Butte, Mont.

Comparing permits issued in September, 1930, with those issued in September, 1929, there was a decrease of 16.6 per cent in new residential buildings; an increase of three-tenths of 1 per cent in new nonresidential buildings; and a decrease of 8.4 per cent in total building operations. The number of families provided with residences in new dwelling houses decreased 7.7 per cent.

Hawaii

IN HONOLULU there was an increase of 124.1 per cent in total building operations, according to permits issued during September, 1930, as compared with those issued during August. There was an increase of 59.4 per cent in new residential buildings and an increase of 289.2 per cent in new nonresidential buildings. The increase in the number of families provided for in new buildings was 35 per cent. Permits were issued for store and mercantile buildings in Honolulu to cost nearly $300,000 and for amusement buildings to cost over $65,000.

TABLE 5.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST AND SEPTEMBER, 1930

New England States

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	August	September	August	September	August	September	August	September
Connecticut:								
Bridgeport	$112,800	$127,625	23	57	$31,710	$12,891	$180,140	$159,558
Greenwich	305,500	226,500	16	15	115,800	83,975	487,600	360,925
Hartford	21,000	29,000	4	8	898,798	48,300	1,060,939	193,385
Meriden	18,500	19,200	4	5	19,240	201,767	59,445	230,797
New Britain	19,500	5,000	5	1	28,226	14,325	47,726	33,079
New Haven	91,000	53,500	11	9	5,087,020	123,480	5,250,810	246,730
Norwalk	82,500	92,300	12	16	18,875	31,170	123,625	193,330
Stamford	62,500	114,300	10	11	861,475	46,250	951,465	188,535
Waterbury	29,000	45,500	7	10	49,750	29,250	106,650	88,550
Maine:								
Bangor	15,000	20,700	4	7	2,200	1,150	17,200	28,450
Lewiston	18,000	16,000	4	3	300,300	400	318,300	18,900
Portland	54,370	54,900	11	12	13,160	10,760	89,075	92,370

TABLE 5.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST AND SEPTEMBER, 1930—Continued

New England States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	August	September	August	September	August	September	August	September
Massachusetts:								
Boston [1]	$569,000	$399,000	122	87	$481,762	$500,515	$1,858,745	$1,365,065
Brockton	22,500	23,100	4	5	85,741	6,250	131,681	59,705
Brookline	18,000	18,500	4	2	262,205	6,350	326,140	32,850
Cambridge	610,000	461,500	16	14	711,478	261,620	1,351,368	792,865
Chelsea	5,000	0	1	0	2,150	8,400	10,190	14,060
Chicopee	16,800	13,000	5	4	15,685	8,050	34,835	22,600
Everett	15,000	3,500	4	1	134,300	384,100	165,800	402,050
Fall River	9,200	4,200	1	2	15,745	58,085	32,090	65,035
Fitchburg	9,000	7,500	3	2	1,810	2,725	12,360	16,735
Haverhill	3,150	3,000	2	2	7,385	2,475	15,445	39,370
Holyoke	37,000	18,000	10	3	6,350	17,350	48,400	103,500
Lawrence	0	16,000	0	6	29,760	159,000	46,160	219,975
Lowell	4,800	14,650	2	3	55,550	8,275	67,365	78,820
Lynn	29,000	41,200	4	9	46,820	11,660	129,890	74,540
Malden	20,200	49,300	4	11	2,860	381,025	49,900	434,705
Medford	67,500	83,900	17	17	26,000	16,100	98,815	114,360
New Bedford	4,000	0	1	0	12,025	260,728	27,350	268,278
Newton	243,000	228,200	21	21	13,320	38,630	274,785	304,535
Pittsfield	55,500	50,700	11	9	10,325	22,525	85,560	91,800
Quincy	128,700	87,400	35	22	13,940	229,370	185,447	358,661
Revere	22,200	16,000	5	4	2,925	50,400	33,025	79,850
Salem	50,000	23,800	8	4	47,150	58,750	105,675	118,610
Somerville	58,500	7,000	16	2	11,235	33,340	89,330	57,740
Springfield	65,700	128,200	17	35	38,775	685,250	249,550	835,075
Taunton	6,000	7,000	2	2	4,305	5,212	27,815	17,482
Waltham	58,700	57,700	11	16	43,625	23,725	108,350	92,015
Watertown	11,000	34,000	1	7	154,150	11,450	170,100	51,600
Worcester	63,200	83,200	15	17	49,845	34,351	173,019	194,542
New Hampshire:								
Manchester	17,900	16,350	6	6	10,825	4,785	47,236	56,393
Rhode Island:								
Central Falls	0	0	0	0	1,050	4,400	4,930	6,225
Cranston	26,500	78,100	5	15	27,825	38,600	60,215	123,500
East Providence	39,300	61,700	8	11	46,275	17,960	100,892	91,302
Newport	31,350	44,000	6	3	3,650	17,100	39,820	71,675
Pawtucket	41,600	48,300	9	10	383,260	15,570	434,820	203,720
Providence	283,300	126,600	39	24	135,075	85,750	588,588	527,757
Woonsocket	600	0	1	0	3,430	2,415	12,495	9,000
Total	3,472,870	3,059,125	527	530	10,325,165	4,076,009	15,891,161	9,231,204
Per cent of change		−11.9		+0.6		−60.5		−41.9

Middle Atlantic States

New Jersey:								
Atlantic City	$19,200	$5,000	5	1	$14,600	$1,350	$47,488	$52,385
Bayonne	14,000	0	3	0	21,500	8,100	40,400	15,100
Bloomfield	120,000	86,500	29	16	122,000	9,000	252,000	128,500
Camden	15,600	0	6	0	38,335	115,415	151,395	141,150
Clifton	71,000	136,000	16	32	20,155	21,270	96,050	160,080
East Orange	12,500	23,500	2	4	10,950	379,375	127,644	433,992
Elizabeth	34,000	45,000	7	11	59,200	70,200	93,200	115,200
Hoboken	0	0	0	0	221,200	1,500	247,180	17,811
Irvington	20,600	20,800	4	4	37,700	39,680	61,350	65,985
Jersey City	73,500	40,000	23	10	34,050	3,271,513	162,850	3,470,773
Kearny	16,000	34,000	4	12	7,800	33,700	30,150	72,325
Montclair	9,000	32,000	1	4	171,760	141,365	269,462	201,130
Newark	123,490	52,000	21	8	174,025	591,933	450,060	735,526
New Brunswick	2,000	4,000	1	1	550	825	65,656	19,795
Orange	13,000	28,750	3	5	176,200	5,750	204,235	55,024
Passaic	19,500	0	4	0	177,650	803,997	226,325	848,997
Paterson	15,000	11,500	3	3	40,012	52,178	170,420	103,466

[1] Applications filed.

TABLE 5.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST AND SEPTEMBER, 1930—Continued

Middle Atlantic States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	August	September	August	September	August	September	August	September
New Jersey—Contd.								
Perth Amboy	$5,000	$7,900	2	2	$6,550	$29,231	$106,990	$53,706
Plainfield	25,500	29,350	3	5	235,160	9,628	283,720	82,981
Trenton	19,000	21,000	1	3	225,300	109,708	271,415	149,371
Union City	35,000	12,000	22	2	11,800	45,800	66,690	98,510
West New York	0	0	0	0	500	21,000	10,515	36,875
New York:								
Albany	141,000	489,000	10	58	924,650	2,431,886	1,125,415	3,004,574
Amsterdam	9,500	0	2	0	6,800	9,950	18,000	16,950
Auburn	12,500	316,000	3	4	93,025	377,415	120,745	699,765
Binghamton	20,000	68,800	7	6	42,943	210,717	95,007	356,683
Buffalo	161,900	251,500	52	82	794,975	2,288,741	1,058,605	2,677,963
Elmira	35,825	21,000	9	1	473,410	10,040	526,430	40,955
Jamestown	47,500	48,400	6	11	18,280	35,250	80,490	98,530
Kingston	11,500	27,000	3	6	5,240	11,590	28,180	45,690
Mount Vernon	96,500	246,000	8	26	42,710	5,300	178,365	320,402
Newburgh	13,000	6,000	2	1	50,915	13,050	70,465	21,700
New Rochelle	233,500	345,100	10	20	24,325	30,250	277,240	400,225
New York City—								
Bronx [1]	2,184,300	3,103,850	470	807	531,200	531,550	2,998,403	4,185,560
Brooklyn [1]	5,178,950	4,629,050	947	1,145	764,675	1,155,935	7,231,825	6,588,040
Manhattan [1]	9,250,000	5,585,000	1,020	563	2,233,500	5,690,302	13,150,125	13,648,312
Queens [1]	2,597,500	3,672,200	613	775	1,074,951	1,419,278	4,066,917	5,747,046
Richmond [1]	280,750	203,975	75	61	67,255	185,830	421,205	654,409
Niagara Falls	67,075	33,475	18	9	14,852	669,489	176,672	742,228
Poughkeepsie	27,700	17,000	4	2	6,500	2,050	57,125	30,900
Rochester	155,400	113,650	20	18	301,192	671,244	568,370	853,154
Schenectady	106,500	56,500	20	10	247,150	36,100	405,200	119,200
Syracuse	272,300	189,100	33	33	120,560	36,910	420,560	402,595
Troy	63,000	47,500	13	9	36,081	17,780	116,006	89,990
Utica	41,100	33,800	9	7	28,400	14,680	77,725	75,530
Watertown	0	11,900	0	3	1,380	2,335	8,710	22,633
White Plains	122,800	592,400	9	93	364,044	308,775	601,859	955,460
Yonkers	998,300	418,700	192	45	290,482	537,485	1,424,362	996,700
Pennsylvania:								
Allentown	30,000	64,000	6	6	13,350	125,000	63,210	211,000
Altoona	11,000	38,390	4	7	24,836	12,110	52,196	67,620
Bethlehem	29,725	46,400	8	8	19,700	5,450	54,800	58,200
Butler	5,000	0	1	0	3,150	600	8,750	3,500
Chester	0	12,000	0	3	147,525	3,375	186,925	44,575
Easton	16,500	125,000	3	0	6,594	3,050	42,984	139,961
Erie	154,800	177,900	18	28	11,455	28,985	196,730	243,086
Harrisburg	39,250	33,000	6	6	14,900	29,025	132,678	104,250
Johnstown	4,000	7,000	2	1	5,560	21,985	39,280	34,880
Lancaster	245,000	36,000	8	8	13,810	4,070	263,780	56,908
McKeesport	18,000	66,000	3	10	13,733	6,195	74,026	98,895
New Castle	32,100	32,800	5	5	15,235	26,270	58,290	63,740
Norristown	0	0	0	0	2,650	4,789	62,615	28,133
Philadelphia	867,800	803,450	86	136	1,037,690	4,618,025	2,325,080	5,765,220
Pittsburgh	713,200	353,400	131	71	4,727,135	173,575	5,585,389	719,219
Scranton	7,200	24,435	3	7	1,119,401	13,570	1,217,021	141,770
Wilkes-Barre	17,300	44,808	3	7	90,736	382,624	126,636	463,903
Wilkinsburg	21,000	0	4	0	16,810	40,030	62,655	45,480
Williamsport	17,500	3,000	2	1	5,379	294,695	33,839	307,657
York	5,500	38,000	1	7	80,290	13,478	102,132	119,671
Total	25,026,165	23,021,783	4,009	4,229	17,736,431	28,273,341	49,428,217	58,571,450
Per cent of change	----------	−8.0	-------	+5.5	----------	+59.4	----------	+18.5

[1] Applications filed

TABLE 5.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST AND SEPTEMBER, 1930—Continued

East North Central States

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	August	September	August	September	August	September	August	September
Illinois:								
Alton	$168,300	$29,476	4	6	$55,142	$4,350	$237,710	$45,508
Aurora	61,295	37,580	10	7	243,315	18,805	329,195	86,727
Belleville	6,500	46,500	2	9	1,370	13,900	7,995	71,200
Bloomington	38,000	12,000	8	3	18,000	27,500	56,000	40,500
Chicago	1,701,700	5,983,500	141	339	6,032,950	7,451,850	8,135,785	13,665,300
Cicero	37,500	23,500	5	3	12,510	4,175	72,838	29,675
Danville	9,200	28,900	4	7	2,100	4,800	20,625	37,500
Decatur	18,000	18,500	4	4	685,900	39,550	708,470	72,350
East St. Louis	52,100	73,000	17	24	28,500	40,950	108,550	121,615
Elgin	52,600	12,650	11	3	10,906	44,610	72,096	69,085
Evanston	33,000	92,000	3	9	119,500	14,500	208,500	247,050
Joliet	13,000	84,500	2	16	451,100	153,100	490,100	272,705
Moline	22,000	43,200	4	9	25,680	10,410	57,419	63,535
Oak Park	10,000	47,000	1	4	16,600	13,035	33,700	78,285
Peoria	174,300	108,700	40	26	13,950	213,350	242,990	336,150
Quincy	7,500	37,000	3	9	1,800	7,045	12,250	50,740
Rockford	95,600	112,200	26	39	64,230	7,430	194,340	206,190
Rock Island	52,000	28,700	9	8	10,630	5,010	129,248	50,511
Springfield	81,100	21,300	14	4	45,480	35,545	144,525	77,981
Indiana:								
East Chicago	6,000	9,000	1	1	266,293	19,808	282,122	56,983
Elkhart	20,500	19,300	2	6	6,015	39,360	32,802	69,579
Evansville	42,000	69,100	12	15	35,750	208,000	103,133	311,405
Fort Wayne	158,410	101,250	21	23	14,645	161,400	224,830	290,595
Gary	85,600	18,100	19	9	20,660	28,555	118,185	70,115
Hammond	40,500	67,000	12	15	34,285	102,261	112,135	177,356
Indianapolis	177,250	249,200	44	49	355,310	133,317	664,744	547,088
Kokomo	3,500	3,850	2	2	6,635	6,475	57,015	16,569
Marion	1,000	2,000	1	1	8,200	10,100	12,025	14,200
Muncie	1,200	3,000	1	1	2,850	23,082	10,819	36,607
Richmond	8,400	25,300	4	6	4,500	17,400	18,310	51,305
Terre Haute	9,500	32,700	3	10	6,320	18,165	28,998	58,960
Michigan:								
Bay City	17,300	20,500	4	6	50,715	3,642	86,287	53,289
Detroit	1,538,295	1,235,256	284	259	1,744,141	3,524,429	3,770,956	5,106,257
Flint	119,788	114,875	21	9	467,714	40,933	623,229	181,393
Grand Rapids	69,300	21,500	13	6	29,205	67,270	141,220	130,450
Hamtramck	5,500	0	2	0	650	829,325	16,535	834,885
Highland Park	16,500	0	1	0	11,150	8,200	41,050	15,925
Jackson	25,000	3,800	6	1	6,785	7,203	44,556	20,219
Kalamazoo	22,500	31,500	4	10	77,810	20,170	125,662	59,729
Lansing	23,800	19,000	8	5	29,770	24,455	102,162	64,330
Muskegon	11,800	6,500	5	3	91,110	22,480	117,496	28,980
Pontiac	12,500	30,500	3	6	359,625	17,485	379,915	50,370
Saginaw	74,800	120,800	19	56	12,353	281,935	101,803	433,850
Ohio:								
Akron	128,900	84,200	27	14	566,205	238,352	797,620	388,627
Ashtabula	13,300	24,650	3	5	3,735	3,575	28,087	41,575
Canton	38,000	31,400	4	3	25,630	6,450	76,690	71,640
Cincinnati	1,226,350	1,084,560	220	113	493,925	102,225	1,842,890	1,297,580
Cleveland	698,500	362,500	90	76	1,475,300	3,509,475	2,883,250	4,276,977
Columbus	217,000	308,100	37	49	39,800	84,900	304,650	430,900
Dayton	180,400	102,982	42	24	59,974	44,616	279,331	179,058
East Cleveland	0	0	0	0	1,460	2,330	5,295	3,247
Hamilton	3,950	18,850	7	4	4,060	4,060	36,780	40,665
Lakewood	61,000	28,000	9	11	85,180	14,975	152,005	54,204
Lima	4,000	0	1	0	6,925	8,225	18,740	14,286
Lorain	29,300	18,200	8	6	6,830	7,015	37,520	27,315
Mansfield	8,500	59,150	2	14	26,800	16,760	39,595	79,050
Marion	2,000	0	1	0	91,935	3,375	98,795	4,420
Newark	12,700	2,000	3	1	550	2,740	14,020	7,090
Portsmouth	7,000	20,400	1	6	13,325	1,395	23,250	26,245
Springfield	17,100	50,900	5	15	46,200	29,020	75,545	86,620
Steubenville	17,500	26,000	3	7	12,575	1,970	32,575	37,670
Toledo	130,250	108,300	27	24	382,895	134,525	584,172	1,957,827
Warren	54,450	18,880	17	7	3,825	4,245	69,830	67,600
Youngstown	78,850	64,750	12	13	59,280	27,318	151,825	127,065

TABLE 5.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST AND SEPTEMBER, 1930—Continued

East North Central States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	August	September	August	September	August	September	August	September
Wisconsin:								
Fond du Lac	$30,000	$8,500	2	3	$2,925	$11,048	$38,650	$26,028
Green Bay	53,100	48,700	15	12	23,595	33,855	84,060	122,230
Kenosha	9,000	17,000	2	3	9,525	27,625	24,575	63,345
Madison	83,600	67,150	16	15	46,190	163,760	154,355	249,457
Milwaukee	423,400	532,300	98	123	378,536	704,038	1,043,434	1,613,047
Oshkosh	17,400	25,637	6	10	14,700	16,925	47,235	53,585
Racine	21,500	163,200	4	20	251,110	94,335	329,275	351,361
Sheboygan	24,300	41,200	5	10	13,220	6,821	48,109	69,715
Superior	19,000	7,500	5	2	18,280	4,400	45,315	22,157
Total	8,734,988	12,369,246	1,472	1,618	15,546,644	19,035,718	27,845,798	36,093,956
Per cent of change		+41.6		+9.9		+22.4		+29.6

West North Central States

Iowa:								
Burlington	$4,300	$7,400	1	2	$13,060	$10,525	$110,660	$17,925
Cedar Rapids	11,000	24,000	2	6	52,813	41,655	107,710	96,566
Council Bluffs	21,000	7,500	3	3	8,400	68,750	39,900	78,750
Davenport	39,200	37,200	11	9	99,343	8,586	198,792	85,332
Des Moines	111,875	56,350	29	15	293,605	66,406	444,165	144,986
Dubuque	31,975	163,800	8	6	3,925	1,548	40,332	190,158
Ottumwa	47,200	37,500	12	7	32,200	4,800	82,960	44,550
Sioux City	99,600	36,400	23	19	73,675	217,565	177,205	258,065
Waterloo	31,400	36,400	9	11	4,235	23,865	42,760	71,785
Kansas:								
Hutchinson	31,950	21,000	8	2	4,160	16,375	45,045	48,075
Kansas City	12,000	30,300	6	16	1,500	3,500	20,493	42,485
Topeka	39,800	40,500	9	10	61,935	30,070	120,845	74,170
Wichita	155,150	249,830	58	87	1,072,347	33,710	1,250,175	314,223
Minnesota:								
Duluth	15,150	34,800	6	11	6,175	338,125	88,535	559,170
Minneapolis	395,840	353,175	101	89	492,190	778,895	1,122,985	1,285,615
St. Paul	91,800	104,700	19	24	252,336	406,895	442,930	725,129
Missouri:								
Joplin	5,000	12,000	3	4	14,650	15,050	42,300	34,550
Kansas City	117,000	147,500	60	32	133,500	178,600	299,850	351,700
Springfield	15,950	34,700	9	10	8,550	19,385	44,950	72,785
St. Joseph	6,000	26,000	2	12	4,425	599,150	20,625	638,815
St. Louis	380,050	641,000	112	256	413,815	521,685	1,287,001	1,345,645
Nebraska:								
Lincoln	23,950	18,200	5	4	100,335	79,800	159,147	104,040
Omaha	80,000	112,200	18	29	395,335	167,781	499,660	308,481
South Dakota:								
Sioux Falls	78,812	39,875	22	10	107,125	30,606	189,781	79,982
Total	1,846,002	2,272,330	536	674	3,649,634	3,663,327	6,878,806	6,972,982
Per cent of change		+23.1		+25.7		+0.4		+1.4

South Atlantic States

Delaware:								
Wilmington	$202,380	$184,500	47	41	$127,534	$33,682	$394,712	$249,306
District of Columbia:								
Washington	1,604,200	403,500	225	71	1,118,305	275,655	2,846,735	1,169,989
Florida:								
Jacksonville	52,050	25,400	12	12	43,845	230,760	187,265	300,650
Miami	16,500	23,700	9	10	48,525	55,650	150,008	164,971
St. Petersburg	20,300	18,000	7	5	16,800	25,900	49,500	54,900
Tampa	8,600	17,900	5	10	58,477	29,725	88,534	81,235

TABLE 5.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST AND SEPTEMBER, 1930—Continued

South Atlantic States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	August	September	August	September	August	September	August	September
Georgia:								
Atlanta	$178,554	$96,150	88	46	$199,171	$253,860	$470,313	$700,934
Columbus	16,400	24,300	5	7	400	76,190	36,567	105,255
Macon	14,800	4,500	2	1	9,970	4,085	45,597	24,655
Savannah	33,600	30,300	11	6	529,200	24,400	570,850	63,050
Maryland:								
Baltimore	493,000	459,000	82	98	760,700	972,510	2,043,000	2,053,110
Cumberland	26,062	21,300	7	7	3,757	400	34,669	22,549
Hagerstown	6,300	0	3	0	1,320	3,795	11,070	6,080
North Carolina:								
Asheville	11,900	0	3	0	685	61,035	17,575	68,575
Charlotte	81,698	98,500	26	30	8,990	15,890	173,224	140,611
Durham	28,700	21,550	8	10	50,188	8,000	85,513	34,935
Greensboro	22,000	19,200	4	6	12,160	900	46,220	29,524
Wilmington	11,500	21,500	3	5	300	2,900	24,700	34,800
Winston-Salem	18,450	21,100	5	10	58,600	21,925	107,475	79,526
South Carolina:								
Charleston	14,350	12,950	6	2	45,200	38,000	67,430	58,648
Columbia	55,850	39,150	13	11	24,375	43,025	93,485	95,770
Greenville	14,860	11,000	4	2	1,075	12,765	20,058	62,505
Virginia:								
Newport News	13,200	18,186	9	7	88,923	17,435	128,731	41,620
Norfolk	82,700	21,300	24	7	306,100	161,938	419,135	197,613
Petersburg	3,900	5,500	4	2	11,760	240	21,471	5,830
Portsmouth	3,000	10,750	1	4	750	19,630	19,292	50,527
Richmond	51,250	56,800	9	14	585,716	269,128	802,268	379,023
Roanoke	21,310	66,100	4	10	452,644	76,015	529,469	149,295
West Virginia:								
Clarksburg	8,500	1,500	4	1	4,640	13,450	21,780	20,975
Huntington	39,000	18,000	7	3	2,700	8,200	43,700	26,800
Wheeling	4,000	2,500	1	1	31,650	255,708	49,120	302,044
Total	3,158,914	1,754,136	638	439	4,604,460	3,012,796	9,599,466	6,775,305
Per cent of change		−44.5		−31.2		−34.6		−29.4

South Central States

Alabama:								
Mobile	$35,400	$28,200	15	18	$27,350	$24,461	$90,822	$70,817
Montgomery	73,750	23,600	35	11	52,650	81,150	160,910	173,235
Arkansas:								
Little Rock	163,500	81,000	50	17	88,110	11,055	333,514	134,039
Kentucky:								
Lexington	0	20,300	0	9	222,005	4,370	230,805	47,703
Louisville	185,000	132,500	26	24	150,075	138,080	397,275	401,825
Newport	0	4,500	0	1	1,250	1,750	4,750	6,250
Paducah	37,300	3,000	14	3	1,750	700	39,350	4,200
Louisiana:								
Baton Rouge	28,463	3,216	11	2	38,890	643	85,090	9,622
New Orleans	115,900	32,650	37	15	583,900	119,240	788,156	182,846
Shreveport	24,933	36,364	13	15	29,930	1,308	91,775	83,878
Oklahoma:								
Oklahoma City	383,500	506,450	121	138	1,455,160	226,470	2,003,500	817,491
Okmulgee	0	0	0	0	5,150	2,000	13,150	2,000
Tulsa	233,325	422,525	65	80	160,620	881,955	431,859	1,351,234
Tennessee:								
Chattanooga	96,846	38,470	25	12	8,600	42,300	119,040	139,010
Knoxville	30,480	77,110	9	17	36,766	69,450	76,300	171,522
Memphis	286,000	319,800	88	111	240,760	443,950	604,760	878,540
Nashville	78,375	61,525	31	31	329,200	44,975	491,732	207,722
Texas:								
Beaumont	91,803	40,500	29	17	58,801	603,143	181,614	760,430
Dallas	127,298	227,902	55	103	704,718	1,484,901	934,990	1,914,136
Fort Worth	100,680	149,817	34	49	3,055,819	1,075,049	3,205,436	1,268,622
Houston	893,000	755,555	186	182	188,450	1,069,500	1,301,903	1,842,455
San Antonio	141,315	146,375	76	61	63,015	107,480	245,270	324,795

TABLE 5.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST AND SEPTEMBER, 1930—Continued

South Central States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	August	September	August	September	August	September	August	September
Texas—Continued.								
Waco	$14,533	$13,367	5	5	$9,000	$52,100	$111,240	$81,072
Wichita Falls	650	5,500	2	2	18,710	4,000	36,875	22,257
Total	3,142,051	3,130,226	927	923	7,530,679	6,580,030	11,980,116	10,895,701
Per cent of change		−0.4		−0.4		−12.6		−9.1

Mountain and Pacific States

Arizona:								
Phoenix	$56,000	$72,150	17	22	$50,433	$74,550	$129,018	$166,905
Tucson	50,100	99,200	15	20	122,250	162,300	188,872	276,375
California:								
Alameda	80,800	49,900	24	22	1,325	2,950	102,515	74,265
Berkeley	106,400	123,635	23	25	25,481	238,850	161,347	400,122
Fresno	14,400	37,900	5	12	7,100	3,810	96,895	76,081
Long Beach	447,075	467,650	155	149	603,100	1,112,085	1,187,125	1,656,390
Los Angeles	2,341,218	3,202,856	811	1,137	3,357,227	2,232,693	6,512,567	6,662,761
Oakland	528,650	213,420	176	69	121,735	174,428	738,265	510,481
Pasadena	92,950	120,917	19	23	278,543	154,467	431,909	353,681
Sacramento	122,450	148,850	50	45	62,134	50,068	215,430	241,625
San Diego	203,375	270,450	66	63	232,980	101,630	501,646	431,689
San Francisco	800,100	725,050	210	189	150,155	963,941	1,215,207	1,924,471
San Jose	30,040	36,100	8	7	273,330	269,580	389,055	317,465
Stockton	20,000	17,250	4	4	74,370	29,991	105,855	63,336
Vallejo	0	0	0	0	20,225	6,565	34,021	15,116
Colorado:								
Colorado Springs	16,500	5,300	4	2	2,575	79,293	25,915	100,088
Denver	331,450	177,250	102	30	61,100	550,900	513,900	898,300
Pueblo	14,300	15,500	6	12	2,643	22,350	28,923	49,173
Montana:								
Great Falls	15,750	19,300	7	4	229,690	3,925	254,285	31,602
Oregon:								
Portland	283,150	269,200	56	36	502,655	1,976,065	1,039,010	2,781,430
Utah:								
Ogden	33,000	38,600	15	20	153,500	11,050	189,700	57,050
Salt Lake City	164,600	184,450	45	48	65,725	29,149	251,770	251,302
Washington:								
Bellingham	22,900	16,300	10	6	2,795	7,855	43,310	37,585
Everett	9,200	0	4	0	14,255	9,160	33,140	15,735
Seattle	358,900	707,700	106	217	890,700	546,760	1,566,875	1,427,790
Spokane	47,675	125,300	15	32	191,116	14,109	287,261	183,589
Tacoma	33,000	22,500	13	8	164,545	160,520	288,425	203,365
Total	6,223,983	7,166,728	1,966	2,202	7,661,687	8,989,044	16,432,241	19,207,772
Per cent of change		+15.1		+12.0		+17.3		+16.2

Hawaii

Hawaii:								
Honolulu	$125,797	$200,539	60	81	$95,573	$372,004	$271,265	$608,027
Per cent of change		+59.4		+35.0		+289.2		+124.1

WAGES AND HOURS OF LABOR

Wages and Hours of Labor in the Cotton-Goods Industry, 1930

THIS article presents the results of a study in 1930 by the Bureau of Labor Statistics of hours and earnings of employees in the cotton-goods manufacturing industry in the United States.

While this study was being made a similar study was carried on in the textile dyeing and finishing industry (see p. 169). The dyeing and finishing departments found in connection with the manufacturing plants are included in the dyeing and finishing report.

Summaries of average full-time hours per week, earnings per hour, and full-time earnings per week in 1930 are given in Table 1, with averages for employees in selected occupations only for each year from 1910 to 1914, and for all employees in all occupations for each of the specified years from 1914 to 1930. The selected occupations in the earlier period were and are the principal occupations of the industry.

Averages for *selected occupations* are comparable one year with another, as are those for *all occupations*, but averages for selected occupations *should not* be compared with averages for all occupations. The reason is evident from an inspection of the two sets of averages for 1914. Average earnings per hour for employees in the selected occupations were 16.5 cents as compared with 15.3 for those in all occupations. Index numbers of these averages, with the 1913 average as the base or 100 per cent, are also shown in the table. The indexes furnish comparable figures, one year with another, from 1910 to 1930.

Average full-time hours per week for the 90,053 employees of the 162 mills covered in 1930 were 53.4 or the same as in 1928, earnings per hour were 32.5 cents or one-tenth of 1 cent more than in 1928, and average full-time earnings per week were $17.36 or 6 cents more than in 1928.

The 1930 averages were computed by the bureau from the hours actually worked and earnings actually made in one representative week by each of the 90,053 wage earners of 162 representative cotton mills in the 11 States that were included in the study.

The earnings in the table include earnings at basic rates and also bonuses earned in the week based on production, efficiency, attendance, or length of service, etc. The hours and earnings of the wage earners were taken directly from the pay rolls and other records of the mills for a representative pay period in March, April, and May (except for a very few mills in other months) and therefore reflect the condition in those months. Based on the United States Census of Manufactures for 1927, the number of wage earners in the 11 States was 90 per cent of the total in the industry in all States and the number covered in the study was 19 per cent of the total.

Average full-time hours per week decreased from an index of 102.1 in 1910 to 100.0 in 1913, and to 89.7 in 1920, and then increased to 92.5 in 1928 and 1930.

Average earnings per hour increased gradually from an index of 87.5 in 1910 to an index of 323.5 in 1920, the peak year. The increase in 1920 over 1913 was 223.5 per cent. The decrease between 1920 and 1930 was 32.3 per cent.

Average full-time earnings per week increased from an index of 89.5 in 1910 to an index of 291.8 in 1920, the peak year. The increase in 1920 over 1913 was 191.8 per cent and the decrease between 1920 and 1930 was 30.2 per cent. Average full-time earnings per week did not change in proportion to average earnings per hour because of the change in average full-time hours per week.

TABLE 1.—AVERAGE HOURS AND EARNINGS, WITH INDEX NUMBERS, 1910 TO 1930

	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
Selected occupations	1910	59	20,725	58.5	$0.140	$8.16	102.1	87.5	89.5
	1911	88	34,397	58.4	.144	8.36	101.9	90.0	91.7
	1912	88	35,941	57.4	.158	9.00	100.2	98.8	98.7
	1913	88	36,498	57.3	.160	9.12	100.0	100.0	100.0
	[1] 1914	90	36,578	56.4	.165	9.24	98.4	103.1	101.3
All occupations	[1] 1914	90	78,582	56.8	.153	8.63			
	1916	106	85,233	56.9	.179	10.08	98.6	120.6	118.3
	1918	106	81,121	56.0	.267	14.95	97.0	179.9	175.5
	1920	96	59,548	51.8	.480	24.86	89.7	323.5	291.8
	1922	97	62,833	52.8	.330	17.42	91.5	222.4	204.5
	1924	114	77,995	53.0	.372	19.72	91.8	250.7	231.5
	1926	151	82,982	53.3	.328	17.48	92.3	221.0	205.2
	1928	158	88,006	53.4	.324	17.30	92.5	218.3	203.1
	1930	162	90,053	53.4	.325	17.36	92.5	219.0	203.8

[1] Two sets of averages are shown for 1914 for the industry, one for selected occupations and the other for all occupations in the industry. The 1910 to 1914 averages for selected occupations only are comparable one year with another, as are those for all occupations one year with another from 1914 to 1930.

Average Hours and Earnings, 1928 and 1930, by Occupation and Sex

TABLE 2 shows 1928 and 1930 average full-time hours per week, earnings per hour, and full-time earnings per week. The averages are for males and females separately in each of the specified occupations, and also for a group designated in the table as "Other employees." This group includes all employees in other occupations, each having too few employees to warrant separate tabulation as an occupation.

Average full-time hours per week of males in 1928 by occupations ranged from 48.3 for mule spinners to 57.8 for frame spinners, and of females from 49.6 for slubber tenders to 54 for creelers. In 1930 averages of males ranged from 48.5 for mule spinners to 55.5 for frame spinners, and of females from 49.8 for drawing-in machine tenders to 53.9 for creelers.

Average earnings per hour of males in 1928 by occupations ranged from 22.4 cents for spooler tenders to 62.7 cents for mule spinners, and of females from 23.9 cents for creelers to 44.2 cents for beamer tenders. In 1930 averages of males ranged from 21 cents for spooler tenders to 67.4 cents for mule spinners, and of females from 24.8 cents for trimmers or inspectors to 40.8 cents for drawing-in machine tenders.

Average full-time earnings per week of males in 1928 by occupations ranged from $12.30 for spooler tenders to $30.28 for mule spinners, and of females from $12.72 for trimmers or inspectors to $22.67 for beamer tenders. In 1930 averages of males ranged from $11.61 for spooler tenders to $32.69 for mule spinners, and of females from $13.04 for trimmers or inspectors to $20.32 for drawing-in machine tenders.

TABLE 2.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY OCCUPATION AND SEX

Occupation	Sex	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
		1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
Picker tenders	Male	157	160	1,171	1,005	54.5	53.8	$0.282	$0.284	$15.37	$15.28
Card tenders and strippers	do	157	160	1,757	1,742	54.2	53.8	.314	.314	17.02	16.89
Card grinders	do	149	155	507	542	53.9	53.7	.407	.403	21.94	21.64
Drawing-frame tenders	do	135	140	987	916	54.9	54.3	.282	.280	15.48	15.20
	Female	58	62	667	595	52.5	52.6	.272	.278	14.28	14.62
Slubber tenders	Male	155	159	1,104	1,106	54.5	54.1	.365	.365	19.89	19.75
	Female	11	12	42	25	49.6	50.7	.403	.390	19.99	19.77
Speeder tenders	Male	147	152	2,913	2,939	55.1	54.8	.345	.343	19.01	18.80
	Female	127	133	2,995	2,971	51.2	51.3	.359	.349	18.38	17.90
Spinners, mule	Male	13	8	316	163	48.3	48.5	.627	.674	30.28	32.69
Spinners, frame	do	43	48	487	623	57.8	55.5	.339	.322	19.59	17.87
	Female	158	162	10,418	10,420	52.9	53.5	.276	.266	14.60	14.23
Doffers	Male	154	158	3,945	4,114	54.6	54.1	.311	.315	16.98	17.04
	Female	23	28	392	320	51.4	51.5	.325	.313	16.71	16.12
Spooler tenders	Male	8	8	16	23	54.9	55.3	.224	.210	12.30	11.61
	Female	158	161	4,617	4,454	53.7	53.5	.243	.251	13.05	13.43
Creelers	Male	19	39	65	100	55.2	55.2	.298	.279	16.45	15.40
	Female	126	105	718	541	54.0	53.9	.239	.252	12.91	13.58
Warper tenders	Male	52	62	164	203	55.4	55.1	.332	.354	18.39	19.51
	Female	119	119	572	563	52.8	52.4	.329	.328	17.37	17.19
Beamer tenders	Male	46	30	270	208	54.7	54.6	.441	.464	24.12	25.33
	Female	6	5	31	36	51.3	53.3	.442	.373	22.67	19.88
Slasher tenders	Male	154	155	786	827	53.7	53.6	.396	.384	21.27	20.58
Drawers-in, hand	do	7	9	11	17	55.2	53.5	.299	.320	16.50	17.12
	Female	127	128	990	917	52.5	52.7	.359	.352	18.85	18.55
Drawing-in machine tenders	Male	63	59	110	112	53.3	52.7	.441	.444	23.51	23.40
	Female	11	9	21	17	52.7	49.8	.414	.408	21.82	20.32
Warp-tying machine tenders	Male	108	112	254	350	54.1	53.7	.407	.412	22.02	22.12
Loom fixers	do	158	158	3,541	3,700	53.7	53.5	.482	.483	25.88	25.84
Weavers	do	158	156	10,326	8,789	53.4	52.7	.392	.400	20.93	21.08
	Female	158	155	8,123	6,653	52.2	52.0	.371	.381	19.37	19.81
Trimmers or inspectors	Male	50	59	201	248	54.7	54.0	.278	.326	15.21	17.60
	Female	141	133	2,255	1,995	52.8	52.6	.241	.248	12.72	13.04
Other employees	Male	158	162	20,930	25,516	53.7	53.8	.302	.312	16.22	16.79
	Female	157	161	6,304	7,303	52.5	53.3	.256	.253	13.44	13.48
All employees	Male	158	162	49,861	53,243	53.9	53.7	.345	.346	18.60	18.58
	Female	158	162	38,145	36,810	52.9	52.9	.296	.293	15.66	15.50
All employees, both sexes		158	162	88,006	90,053	53.4	53.4	.324	.325	17.30	17.36

Average Hours and Earnings, 1928 and 1930, by Sex and State

TABLE 3 shows for males and females separately, and for both sexes combined, average full-time hours per week, earnings per hour, and full-time earnings per week in each State, in 1928 and 1930. The purpose of this table is to make easy the comparison of averages of each State, one year with another, and also of the averages of one State with any other State in 1928 or 1930.

Average full-time hours per week of males in Alabama increased from 55 in 1928 to 55.3 in 1930, average earnings per hour increased from 26.5 cents in 1928 to 27.9 cents in 1930, and average full-time earnings increased from $14.58 in 1928 to $15.43 in 1930.

Males in Connecticut earned an average of 42.3 cents per hour in 1928 and 41.7 cents in 1930, and females earned an average of 35.2 cents per hour in 1928 and 34.1 cents in 1930.

Average full-time hours per week of males in 1928 in the different States ranged from 48.6 to 56.2, and of females from 47.9 to 56. Averages of both sexes combined, or the industry as a whole, ranged from 48.5 to 56.1 hours. In 1930 the averages of males ranged from 48.1 to 56.5 hours, of females from 47.7 to 56.5 hours, and of males and females combined ranged from 47.9 to 56.5 hours.

Average earnings per hour in 1928 of males by States ranged from 26.5 to 45.5 cents and of females from 21.6 to 38.1 cents; for males and females combined from 24.4 to 41.9 cents. In 1930 averages of males ranged from 27.9 to 49.2 cents per hour, of females from 21.7 to 40 cents per hour and of males and females combined from 25.5 to 45 cents per hour in the several States.

Average full-time earnings per week of males in 1928 by States ranged from $14.58 to $24.52, of females from $11.88 to $20.31, and of males and females combined from $13.42 to $22.46. In 1930 averages of males ranged from $15.43 to $24.38, of females from $11.98 to $20.12, and of males and females combined from $14.10 to $22.43 as between the States.

Between 1928 and 1930 average full-time earnings per week of both sexes combined decreased in 4 and increased in 7 of the 11 States covered. The decreases by States ranged from 3 cents to $1.98 per week and the increases from 3 cents to $1.97 per week. For all the States combined the increase was 6 cents per week.

TABLE 3.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY SEX AND STATE

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
	1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
Males										
Alabama	6	6	3,185	3,611	55.0	55.3	$0.265	$0.279	$14.58	$15.43
Connecticut	6	5	1,645	1,700	50.9	50.8	.423	.417	21.53	21.18
Georgia	16	15	6,679	7,355	56.2	56.5	.281	.286	15.79	16.16
Maine	5	4	1,163	1,519	54.1	53.7	.370	.372	20.02	19.98
Massachusetts	23	24	9,223	8,443	49.7	49.0	.427	.431	21.22	21.12
New Hampshire	6	6	1,969	2,159	53.9	53.7	.455	.454	24.52	24.38
New York	3	3	945	1,184	48.6	48.1	.439	.492	21.34	23.67
North Carolina	52	55	12,561	13,318	55.8	55.0	.312	.322	17.41	17.71
Rhode Island	15	15	2,990	2,786	52.1	51.8	.443	.440	23.08	22.79
South Carolina	23	26	8,116	9,924	55.0	54.8	.281	.292	15.46	16.00
Virginia	3	3	1,385	1,252	55.2	54.7	.345	.307	19.04	16.79
Total	158	162	49,861	53,243	53.9	53.7	.345	.346	18.60	18.58
Females										
Alabama	6	6	2,426	2,433	55.0	55.2	.216	.217	11.88	11.98
Connecticut	6	5	1,464	1,386	50.7	50.7	.352	.341	17.85	17.29
Georgia	16	15	4,598	4,272	56.0	56.5	.228	.232	12.77	13.11
Maine	5	4	1,477	1,481	54.0	53.8	.291	.304	15.71	16.36
Massachusetts	23	24	9,112	7,724	47.9	48.0	.353	.353	16.91	16.94
New Hampshire	6	6	2,018	1,908	53.3	53.1	.381	.379	20.31	20.12
New York	3	3	1,156	1,159	48.4	47.7	.375	.400	18.15	19.08
North Carolina	52	55	6,949	6,963	55.8	55.0	.262	.257	14.62	14.14
Rhode Island	15	15	2,764	2,537	52.2	51.3	.373	.367	19.47	18.83
South Carolina	23	26	5,254	6,039	55.0	54.8	.224	.240	12.32	13.15
Virginia	3	3	927	908	55.1	54.8	.272	.246	14.99	13.48
Total	158	162	38,145	36,810	52.9	52.9	.296	.293	15.66	15.50

TABLE 3.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY SEX AND STATE—Con.

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
	1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
Males and females										
Alabama	6	6	5,611	6,044	55.0	55.3	$0.244	$0.255	$13.42	$14.10
Connecticut	6	5	3,109	3,078	50.8	50.8	.391	.383	19.86	19.46
Georgia	16	15	11,277	11,627	56.1	56.5	.260	.268	14.59	15.14
Maine	5	4	2,640	3,000	54.1	53.8	.327	.340	17.69	18.29
Massachusetts	23	24	18,335	16,167	48.8	48.5	.392	.395	19.13	19.16
New Hampshire	6	6	3,987	4,067	53.6	53.4	.419	.420	22.46	22.43
New York	3	3	2,101	2,343	48.5	47.9	.404	.450	19.59	21.56
North Carolina	52	55	19,510	20,281	55.8	55.0	.295	.301	16.46	16.56
Rhode Island	15	15	5,754	5,323	52.2	51.6	.410	.406	21.40	20.95
South Carolina	23	26	13,370	15,963	55.0	54.8	.260	.274	14.30	15.02
Virginia	3	3	2,312	2,160	55.1	54.7	.316	.282	17.41	15.43
Total	158	162	88,006	90,053	53.4	53.4	.324	.325	17.30	17.36

Table 4 presents for each State for 1930 average full-time hours per week, earnings per hour, and full-time earnings per week of employees in four of the representative occupations for which averages are shown in Table 2. Average full-time hours per week of male speeder tenders in the various States ranged from 48 to 56.4 and of females from 47.9 to 56.5. Average earnings per hour of males ranged from 29.2 to 48.3 cents and of females from 25.7 to 41.3 cents. Average full-time earnings per week of males ranged from $16.15 to $26.08 and of females from $14.19 to $21.97 per week.

TABLE 4.—AVERAGE HOURS AND EARNINGS FOR 4 OCCUPATIONS, 1930, BY SEX AND STATE

State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
	Speeder tenders, male					Speeder tenders, female				
Alabama	5	147	55.3	$0.292	$16.15	6	170	55.2	$0.257	$14.19
Connecticut	4	54	50.7	.423	21.45	5	174	50.0	.377	18.85
Georgia	15	474	56.4	.300	16.92	12	155	56.5	.297	16.78
Maine	4	43	52.8	.344	18.16	4	211	53.9	.319	17.19
Massachusetts	18	211	54.0	.483	26.08	24	1,023	47.9	.372	17.82
New Hampshire	5	55	53.8	.458	24.64	6	191	53.2	.413	21.97
New York	3	47	48.0	.456	21.89	3	182	48.0	.399	19.15
North Carolina	55	972	55.0	.340	18.70	30	174	55.1	.295	16.25
Rhode Island	14	80	52.6	.441	23.20	15	350	51.6	.385	19.87
South Carolina	26	744	54.7	.312	17.07	25	308	54.7	.284	15.53
Virginia	3	112	54.6	.319	17.42	3	33	55.0	.288	15.84
Total	152	2,939	54.8	.343	18.80	133	2,971	51.3	.349	17.90

TABLE 4.—AVERAGE HOURS AND EARNINGS FOR 4 OCCUPATIONS, 1930, BY SEX AND STATE—Continued

State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
	Spinners, frame, male					Spinners, frame, female				
Alabama						6	694	55.2	$0.215	$11.87
Connecticut	2	84	50.3	$0.350	$17.61	5	228	51.2	.321	16.44
Georgia	6	43	57.8	.205	11.85	15	1,311	56.6	.222	12.57
Maine	1	(1)	(1)	(1)	(1)	4	266	53.9	.311	16.76
Massachusetts	10	213	59.2	.405	23.98	24	1,440	48.0	.342	16.42
New Hampshire	3	13	53.5	.412	22.04	6	467	52.2	.400	20.88
New York	2	20	48.0	.520	24.96	3	250	46.6	.416	19.39
North Carolina	7	65	54.5	.199	10.85	55	2,449	55.0	.231	12.71
Rhode Island						15	570	51.0	.355	18.11
South Carolina	17	144	54.5	.172	9.37	26	2,527	54.8	.222	12.17
Virginia						3	218	54.4	.245	13.33
Total	48	623	55.5	.322	17.87	162	10,420	53.5	.266	14.23
	Weavers, male					Weavers, female				
Alabama	6	412	55.3	$0.327	$18.08	6	348	55.4	$0.300	$16.62
Connecticut	4	427	50.4	.435	21.92	5	326	50.6	.409	20.70
Georgia	15	932	56.2	.308	17.31	14	592	56.0	.303	16.97
Maine	4	173	53.7	.449	24.11	4	150	53.9	.408	21.99
Massachusetts	22	2,285	48.0	.460	22.08	22	2,206	48.0	.415	19.92
New Hampshire	6	148	54.1	.460	24.89	6	183	53.6	.493	26.42
New York	3	167	48.3	.554	26.76	3	159	48.0	.527	25.30
North Carolina	54	2,142	55.1	.372	20.50	53	1,188	55.1	.337	18.57
Rhode Island	14	631	51.3	.489	25.09	14	585	50.9	.463	23.57
South Carolina	25	1,289	54.8	.347	19.02	25	782	54.8	.312	17.10
Virginia	3	183	54.7	.340	18.60	3	134	54.9	.321	17.62
Total	156	8,789	52.7	.400	21.08	155	6,653	52.0	.381	19.81
	Loom fixers, male									
Alabama	6	229	55.6	$0.396	$22.02					
Connecticut	5	117	50.7	.580	29.41					
Georgia	15	415	56.7	.379	21.49					
Maine	4	122	53.9	.537	28.94					
Massachusetts	23	634	48.8	.586	28.60					
New Hampshire	6	164	53.8	.613	32.98					
New York	3	98	48.1	.737	35.45					
North Carolina	54	883	55.0	.457	25.14					
Rhode Island	14	237	51.3	.590	30.27					
South Carolina	25	723	54.8	.403	22.08					
Virginia	3	78	54.7	.436	23.85					
Total	158	3,700	53.5	.483	25.84					

[1] Data included in total.

Wages and Hours of Labor in the Dyeing and Finishing of Textiles, 1930

THIS report is the result of a study by the Bureau of Labor Statistics of hours of labor and earnings of employees in the dyeing and finishing of textiles in the United States in 1930.

The information used in compiling the report was collected by agents of the bureau for 17,739 males and 3,743 females of 109 representative establishments in 8 States. The work of the establishments included in the report consisted mostly in the dyeing and

finishing of cotton textiles. In some plants mixtures of rayon and silk were dyed and finished.

The wage figures in the report are for the dyeing and finishing department of 37 cotton mills that produce and finish cotton goods and for 72 plants that do nothing but dye and finish textiles. Nearly all of the data were taken from pay rolls for pay periods in March, April, and May, 1930, and therefore represent conditions in the industry as of those months.

Average Hours and Earnings, 1930, by Occupations

AVERAGE full-time hours per week, average earnings per hour, and average full-time earnings per week are shown in Table 1 for each of 45 selected occupations, and also a separate group of "Other employees" made up of employees in all other occupations in the industry, each too few in number of employees to warrant tabulation as an occupation.

Full-time hours per week of males in the various occupations ranged from 48.7 for die makers to 56.9 for pressmen, and of females from 48.0 for steamer tenders to 55.0 for mercerizers. The average for all males and females combined, or the industry, was 50.9 hours per week.

Average earnings per hour of males in the various occupations ranged from 27.4 cents for pressmen to $1.247 for machine engravers, and of females ranged from 24.9 cents for dyeing-machine tenders to 43.8 cents for batchers. The average for all males and females combined, or the industry, was 45.2 cents per hour.

Average full-time earnings per week of males in the various occupations ranged from $15.59 for pressmen to $61.85 for printing-machine tenders, and of females from $12.33 for dyeing-machine tenders to $21.44 for truckers. The average for all males and females combined, or the industry, was $23.01.

TABLE 1.—AVERAGE HOURS AND EARNINGS IN THE DYEING AND FINISHING OF TEXTILES IN 1930, BY OCCUPATIONS

Occupation	Sex	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Ager tenders	Male	23	114	51.4	$0.435	$22.36
Back tenders, printing	do	26	374	51.3	.466	23.91
Balers	do	36	85	51.7	.362	18.72
Batchers (cloth winders)	do	41	300	49.9	.443	22.11
	Female	4	34	48.3	.438	21.16
Bath mixers	Male	27	51	50.1	.473	23.70
Calender tenders	do	72	537	51.4	.431	22.15
Color mixers	do	58	224	52.1	.489	25.48
Die makers	do	9	27	48.7	1.240	60.39
Dryer tenders	do	82	804	51.2	.435	22.27
	Female	3	47	48.5	.299	14.50
Dyeing-machine tenders	Male	96	1,618	50.6	.465	23.53
	Female	1	6	49.5	.249	12.33
Engravers, hand	Male	8	27	49.1	1.235	60.64
Engravers, machine	do	14	37	49.4	1.247	61.60
Etchers	do	6	9	50.3	.938	47.18
Floormen	do	23	133	52.3	.466	24.37
Folders	do	57	456	51.3	.587	30.11
	Female	29	247	49.4	.368	18.18
Inspectors	Male	46	345	50.1	.459	23.00
	Female	28	269	51.8	.295	15.28
Jackmen, printing	Male	19	70	51.2	.483	24.73
Kettlemen, color mixing	do	26	58	51.8	.485	25.12
Kettlemen's helpers	do	10	80	49.9	.475	23.70
Kier boilers	do	54	154	53.0	.433	22.95

TABLE 1.—AVERAGE HOURS AND EARNINGS IN THE DYEING AND FINISHING OF TEXTILES IN 1930, BY OCCUPATIONS—Continued

Occupation	Sex	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Knotters	Female	15	88	51.0	$0.298	$15.20
Mangle tenders	Male	57	407	51.2	.424	21.71
	Female	3	11	50.4	.310	15.62
Measurers	Male	11	46	50.8	.457	23.22
	Female	16	80	50.5	.423	21.36
Mercerizers	Male	35	118	52.7	.434	22.87
	Female	1	1	55.0	.387	21.29
Openers	Male	43	152	49.6	.487	24.16
Packers	do	74	342	51.8	.423	21.91
	Female	11	37	50.4	.313	15.78
Pilers	Male	19	181	49.4	.337	16.65
Plaiters	do	35	259	51.1	.374	19.11
	Female	2	9	50.3	.281	14.13
Polishers, metal	Male	14	47	50.9	.490	24.94
Pressmen	do	5	8	56.9	.274	15.59
Printing-machine tenders	do	28	313	51.5	1.201	61.85
Roller turners	do	10	18	50.5	.570	28.79
Scutcher tenders	do	14	40	50.6	.409	20.70
Sewers	do	39	149	51.2	.389	19.92
	Female	56	504	51.4	.312	16.04
Singers	Male	47	118	50.7	.415	21.04
Soaper tenders	do	27	192	51.2	.410	20.99
Soap mixers	do	14	34	51.1	.429	21.92
Sprinkler tenders	do	21	68	51.4	.379	19.48
Steamer tenders	do	15	126	48.8	.438	21.37
	Female	1	3	48.0	.340	16.32
Swing tenders	Male	36	218	50.6	.373	18.87
	Female	3	26	49.2	.310	15.25
Tenter-frame tenders	Male	69	925	51.0	.435	22.19
	Female	14	122	50.4	.353	17.79
Truckers	Male	56	800	50.6	.405	20.49
	Female	1	1	54.0	.397	21.44
Tub washers	Male	20	55	52.9	.404	21.37
Washer tenders	do	60	931	51.3	.447	22.93
Yarn winders	do	9	68	56.2	.290	16.30
	Female	13	385	51.9	.350	18.17
Other employees	Male	109	6,621	51.0	.475	24.23
	Female	73	1,873	50.1	.336	16.83
All employees	Male	109	17,739	51.0	.473	24.12
	Female	84	3,743	50.5	.335	16.92
All employees, male and female		109	21,482	50.9	.452	23.01

Average Hours and Earnings, by Sex and State

TABLE 2 shows by States average full-time hours per week, earnings per hour, and full-time earnings per week in 1930 for males and females separately and for both sexes combined.

Average full-time hours per week of males ranged in the various States from 48.9 to 55.0; of females from 48.0 to 55.0; and of both sexes combined from 48.8 to 55.0. The average for males in all States was 51.0, for females was 50.5, and for all males and females combined, or the industry, was 50.9.

Average earnings per hour of males ranged in the various States from 32.0 to 57.2 cents; of females from 22.3 to 38.6 cents; and of both sexes combined from 31.0 to 55.4 cents. The average for males in all States was 47.3 cents, and for females was 33.5 cents per hour.

Average full-time earnings per week of males ranged in the various States from $17.60 to $30.60; of females from $12.27 to $20.61; and of both sexes combined from $16.96 to $29.58. The average for males in all States was $24.12, and for females $16.92.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN THE DYEING AND FINISHING OF TEXTILES IN 1930, BY SEX AND STATE

Sex and State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Males					
Connecticut	5	724	53.5	$0.572	$30.60
Massachusetts	9	4,064	48.9	.433	21.17
New Jersey	16	5,503	49.8	.523	26.05
New York	9	1,303	48.9	.520	25.43
North Carolina	43	1,784	55.0	.320	17.60
Pennsylvania	12	923	53.3	.546	29.10
Rhode Island	10	2,568	52.5	.511	26.83
South Carolina	5	870	55.0	.332	18.26
Total	109	17,739	51.0	.473	24.12
Females					
Connecticut	5	85	53.4	.386	20.62
Massachusetts	8	813	48.0	.313	15.02
New Jersey	16	1,077	48.6	.377	18.32
New York	9	218	48.5	.343	16.64
North Carolina	20	863	54.0	.288	15.55
Pennsylvania	11	230	51.7	.352	18.20
Rhode Island	10	359	52.5	.377	19.79
South Carolina	5	98	55.0	.223	12.27
Total	84	3,743	50.5	.335	16.92
Males and females					
Connecticut	5	809	53.4	.554	29.58
Massachusetts	9	4,877	48.8	.417	20.35
New Jersey	16	6,580	49.6	.502	24.90
New York	9	1,521	48.8	.497	24.25
North Carolina	43	2,647	54.7	.310	16.96
Pennsylvania	12	1,153	53.0	.512	27.14
Rhode Island	10	2,927	52.5	.497	26.09
South Carolina	5	968	55.0	.321	17.66
Total	109	21,482	50.9	.452	23.01

Average Hours of Earnings, by Occupation, Sex, and State

TABLE 3 presents for each State, 1930, average full-time hours per week, earnings per hour, and full-time earnings per week of employees in 12 representative occupations to illustrate the variations in hours and earnings of employees in all occupations in the industry in different States.

Average full-time hours per week of calender tenders, the first occupation in the table, ranged by States from 48.9 to 55.0. The average for all States was 51.4. Average earnings per hour ranged from 30.3 to 53.9 cents. The average for all States was 43.1 cents. Average full-time earnings per week ranged from $16.67 to $28.84. The average for all States was $22.15.

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 12 SPECIFIED OCCUPATIONS IN FINISHING AND DYEING OF TEXTILES IN 1930, BY SEX AND STATE

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Calender tenders, male:					
Connecticut	3	35	53.5	$0.539	$28.84
Massachusetts	8	105	48.9	.396	19.36
New Jersey	15	108	49.6	.462	22.92
New York	9	61	48.9	.474	23.18
North Carolina	16	39	54.5	.323	17.60
Pennsylvania	7	19	53.3	.493	26.28
Rhode Island	10	123	53.0	.472	25.02
South Carolina	4	47	55.0	.303	16.67
Total	72	537	51.4	.431	22.15
Dryer tenders, male:					
Connecticut	5	33	53.2	.477	25.38
Massachusetts	7	158	48.4	.375	18.15
New Jersey	15	317	51.6	.478	24.66
New York	8	66	48.5	.425	20.61
North Carolina	23	45	55.1	.385	21.21
Pennsylvania	10	48	53.0	.456	24.17
Rhode Island	10	110	52.2	.440	22.97
South Carolina	4	27	55.0	.293	16.12
Total	82	804	51.2	.435	22.27
Dryer tenders, female:					
New Jersey	2	32	48.0	.315	15.12
New York	1	(1)	(1)	(1)	(1)
Total	3	47	48.5	.299	14.50
Dyeing-machine tenders, male:					
Connecticut	4	35	52.5	.505	26.51
Massachusetts	8	157	48.7	.358	17.43
New Jersey	16	819	48.9	.506	24.74
New York	8	56	48.7	.458	22.30
North Carolina	36	169	55.1	.298	16.42
Pennsylvania	11	172	53.1	.554	29.42
Rhode Island	10	166	52.4	.491	25.73
South Carolina	3	44	55.0	.291	16.01
Total	96	1,618	50.6	.465	23.53
Folders, male:					
Connecticut	3	14	52.9	.597	31.58
Massachusetts	8	125	49.0	.550	26.95
New Jersey	6	53	50.4	.689	34.73
New York	8	53	48.5	.699	33.90
North Carolina	12	47	54.8	.399	21.87
Pennsylvania	7	38	52.8	.495	26.14
Rhode Island	9	96	52.3	.698	36.51
South Carolina	4	30	55.0	.472	25.96
Total	57	456	51.3	.587	30.11
Folders, female:					
Massachusetts	5	53	48.0	.410	19.68
New Jersey	12	139	48.5	.379	18.38
New York	1	(1)	(1)	(1)	(1)
North Carolina	4	24	55.0	.247	13.59
Pennsylvania	2	4	53.0	.366	19.40
Rhode Island	3	16	51.4	.325	16.71
South Carolina	2	5	55.0	.193	10.62
Total	29	247	49.4	.368	18.18
Inspectors, male:					
Connecticut	2	12	54.2	.517	28.02
Massachusetts	6	79	48.1	.364	17.51
New Jersey	7	165	49.3	.499	24.60
New York	7	12	48.8	.498	24.30
North Carolina	8	32	55.0	.358	19.69
Pennsylvania	7	13	52.3	.569	29.76
Rhode Island	7	25	51.1	.587	30.00
South Carolina	2	7	55.0	.346	19.03
Total	46	345	50.1	.459	23.00

[1] Data included in total.

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 12 SPECIFIED OCCUPATIONS IN FINISHING AND DYEING OF TEXTILES IN 1930, BY SEX AND STATE—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Inspectors, female:					
Connecticut	1	(1)	(1)	(1)	(1)
Massachusetts	5	53	48.0	$0.333	$15.98
New Jersey	4	60	48.0	.358	17.18
New York	1	(1)	(1)	(1)	(1)
North Carolina	11	128	55.2	.235	12.97
Pennsylvania	2	6	53.1	.368	19.54
Rhode Island	4	11	54.0	.328	17.71
Total	28	269	51.8	.295	15.28
Mangle tenders, male:					
Connecticut	3	21	53.2	.543	28.89
Massachusetts	5	53	48.5	.379	18.38
New Jersey	11	100	50.7	.481	24.39
New York	7	64	48.3	.474	22.89
North Carolina	9	36	54.7	.333	18.22
Pennsylvania	7	14	52.6	.483	25.41
Rhode Island	10	73	51.4	.448	23.03
South Carolina	5	46	55.0	.293	16.12
Total	57	407	51.2	.424	21.71
Printing-machine tenders, male:					
Connecticut	3	16	53.8	1.377	74.08
Massachusetts	6	129	51.2	1.114	57.04
New Jersey	6	61	48.7	1.218	59.32
New York	2	17	49.1	1.390	68.25
North Carolina	1	(1)	(1)	(1)	(1)
Pennsylvania	3	21	54.8	1.413	77.43
Rhode Island	6	57	53.3	1.322	70.46
South Carolina	1	(1)	(1)	(1)	(1)
Total	28	313	51.5	1.201	61.85
Sewers, male:					
Connecticut	3	5	54.2	.466	25.26
Massachusetts	5	63	48.5	.349	16.93
New Jersey	9	19	49.1	.475	23.32
New York	3	4	49.8	.475	23.66
North Carolina	8	17	55.6	.246	13.68
Pennsylvania	3	5	55.3	.446	24.66
Rhode Island	8	36	54.0	.446	24.08
Total	39	149	51.2	.389	19.92
Sewers, female:					
Connecticut	3	12	52.4	.328	17.19
Massachusetts	6	117	48.0	.294	14.11
New Jersey	14	94	48.5	.362	17.56
New York	9	22	48.3	.373	18.02
North Carolina	9	196	54.9	.283	15.54
Pennsylvania	3	8	51.5	.318	16.38
Rhode Island	9	42	51.0	.392	19.99
South Carolina	3	13	55.0	.233	12.82
Total	56	504	51.4	.312	16.04
Tenter frame tenders, male:					
Connecticut	4	24	53.0	.509	26.98
Massachusetts	7	144	49.3	.359	17.70
New Jersey	13	428	49.8	.485	24.15
New York	8	56	50.6	.481	24.34
North Carolina	16	41	55.0	.303	16.67
Pennsylvania	7	37	54.3	.479	26.01
Rhode Island	9	121	52.6	.459	24.14
South Carolina	5	74	55.0	.299	16.45
Total	69	925	51.0	.435	22.19
Tenter frame tenders, female:					
Connecticut	1	(1)	(1)	(1)	(1)
New Jersey	5	83	49.2	.335	16.48
New York	1	(1)	(1)	(1)	(1)
Pennsylvania	2	7	52.5	.278	14.60
Rhode Island	5	26	53.0	.395	20.94
Total	14	122	50.4	.353	17.79

[1] Data included in total.

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 12 SPECIFIED OCCUPATIONS IN FINISHING AND DYEING OF TEXTILES IN 1930, BY SEX AND STATE—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Truckers, male:					
Connecticut	3	41	53.6	$0.474	$25.41
Massachusetts	7	260	48.5	.357	17.31
New Jersey	13	133	49.4	.496	24.50
New York	8	71	48.6	.465	22.60
North Carolina	6	53	54.7	.264	14.44
Pennsylvania	6	48	53.2	.426	22.67
Rhode Island	9	156	51.9	.446	23.12
South Carolina	4	38	55.0	.301	16.56
Total	56	800	50.6	.405	20.49
Washer tenders, male:					
Connecticut	4	33	52.9	.480	25.39
Massachusetts	7	116	48.7	.356	17.34
New Jersey	12	559	51.2	.492	25.19
New York	9	45	48.8	.444	21.67
North Carolina	9	30	55.0	.287	15.79
Pennsylvania	6	15	52.8	.467	24.66
Rhode Island	10	87	52.0	.422	21.94
South Carolina	3	46	55.0	.304	16.72
Total	60	931	51.3	.447	22.93
Yarn winders, male:					
Massachusetts	1	[1]	[1]	[1]	[1]
North Carolina	8	66	56.4	.284	16.02
Total	9	68	56.2	.290	16.30
Yarn winders, female:					
New Jersey	1	[1]	[1]	[1]	[1]
North Carolina	8	287	51.8	.351	18.18
Pennsylvania	4	89	52.6	.349	18.36
Total	13	385	51.9	.350	18.17

[1] Data included in total.

Overtime and Work on Sunday and Holidays

OVERTIME is any time worked by an employee in excess of his regular working hours per day or week, regardless of whether a higher rate than the regular rate is paid therefor.

In answering inquiries concerning overtime 71 of the 109 establishments included in the study reported the same rate of pay per hour for each hour of overtime and for each hour of work on Sunday and holidays as for regular working hours, 4 reported no overtime work, and 34 reported a higher rate for such work than for regular working time.

Table 4 shows the employees of the 34 establishments who were entitled to extra pay for overtime and for work on Sunday and holidays and the number of *times regular rate* for such work.

TABLE 4.—PAY FOR OVERTIME AND FOR WORK ON SUNDAY AND HOLIDAYS, EMPLOYEES ENTITLED, AND RATE, 1930

Number of establishments	Employees entitled	Times regular rate for—	
		Overtime	Work on Sunday and holidays
2	All	1½	
12	do	1½	
2	do	1¼	
1	do	1⅕	
1	Day workers	1¼	
1	Machinists and carpenters	1¼	
1	Maintenance employees	1½	
1	Printers	1½	
1	Printing machine tenders	1½	
1	Time workers	1½	
2	do	1½	
1	do	1¼	
5	All except salaried employees	1½	
1	Printers and apprentices, engravers and apprentices, die makers and apprentices, rollers, turners, and clampers	1½	
1	Time workers except folders and maintenance men	1¼	
	Folders and maintenance men	1½	
1	All	[1] 1½	

[1] On Saturday only.

Union Wage Rates in Time-Work Trades in 1930

UNION wage rates in 1930 were, on the average, higher than in 1929, and higher than in any preceding year, according to the annual survey recently completed by the Bureau of Labor Statistics, covering 758,211 organized workers.

The present article covers the principal time-work trades—bakery trades, building trades, chauffeurs, teamsters and drivers, stone trades, laundry workers, linemen, longshoremen, and printing trades—in 67 important industrial cities.[1] There are many trades whose members are employed wholly or mainly on piecework, but these frequently have a multitude of rates which are practically impossible to incorporate in a general tabulation and difficult to understand by anyone not familiar with the particular industries, and are therefore not included in the present tabulation. The rates for street-railway motormen and conductors and bus divers have likewise been omitted from tabulation this year because their hours of labor are not uniform or susceptible of presentation in the same manner as the trades above enumerated. The data for street-railway employees, pieceworkers, and employees in other occupations that do not readily lend themselves to the general tabulation will be published later.

The average hourly rate in 1930 for all trades covered was $1.250 as compared with $1.204 in 1929, or an average increase of 4.6 cents an hour. Of the 72 individual time-work trades covered by the survey, 47 showed increases in average wages per hour in 1930 as compared with 1929, 1 showed no change in rate, and the remaining 24 showed decreases. The average rates in the principal trade groups are shown in Table 1.

[1] Preliminary data on 20 trades in 40 cities were given in the September, 1930, Labor Review (pp. 138-16

TABLE 1.—AVERAGE HOURLY WAGE RATES IN SPECIFIED TRADE GROUPS IN 1930 AS COMPARED WITH 1929

Trade group	Average hourly wage rate		Increase, 1930 over 1929
	1929	1930	
Bakers	$0.979	$0.965	[1] $0.014
Building-trades workers	1.352	1.410	.058
Chauffeurs and teamsters and drivers	.715	.732	.017
Granite and stone cutters	1.369	1.412	.043
Laundry workers	.458	.479	.021
Linemen	1.019	1.128	.109
Longshoremen	.863	.875	.012
Printing and publishing:			
Book and job	1.049	1.074	.025
Newspaper	1.241	1.241	[2]
Average, all trades	1.204	1.250	.046

[1] Decrease. [2] No change.

The reduction in regular hours of labor from year to year has been almost as continuous as the increase in wage rates per hour, and the year 1930 was no exception, showing as it did a reduction of nearly 2 per cent from 1929, the average full-time hours in 1929 being 44.8 and in 1930, 43.9. In earlier years the decrease in hours was brought about mainly by reductions in those trades working more than eight hours per day or six days per week. Later the reduction was due to the increasing prevalence of the short day on Saturday (making a 5½-day week); at present, reductions are due to the increasing number of trades working a 5-day week. The building trades with an average of 41.9 hours have the shortest working week as a group and indications are that the 5-day week for all building trades is steadily and with increasing pace displacing the 5½-day week for this group. More than half of the reported membership of the building trades have a 5-day working week. Teamsters and drivers with an average of 53.7 hours had the longest working week. Table 2 shows for 1930 the average working hours and the per cent of members in each trade group having specified working hours. The hours stated represent the regular full time per week. No data are available as to broken time or overtime that may have been worked.

TABLE 2.—PER CENT OF TRADE-UNION MEMBERS IN SPECIFIED TRADE GROUPS WORKING EACH CLASSIFIED NUMBER OF HOURS PER WEEK, MAY 15, 1930

Trade group	Average hours per week	Per cent of members whose hours per week were—										
		Under 40	40	Over 40 and under 44	44	Over 44 and under 48	48	Over 48 and under 54	54	Over 54 and under 60	60	Over 60
Bakers	47.3	.....	0.7	10.7	.....	6.9	78.4	0.8	2.4	.....	0.1	.....
Building trades	41.9	.....	55.5	.....	41.6	1.5	1.0	.3	.1	[1]	.....	.....
Chauffeurs and teamsters and drivers	53.7	.....	1.0	.6	1.6	4.9	24.1	11.5	14.6	10.0	30.5	1.2
Granite and stone trades	42.2	.....	45.2	.....	54.7	.....	.....	.1	.....	.....	.....	.....
Laundry workers	48.0	.....	.....	.....	.....	.....	100.0	.....	.....	.....	.....	.....
Linemen	45.1	.....	12.9	.....	50.6	1.2	24.2	9.9	.5	.7	.....	.....
Longshoremen	44.6	.....	.....	.....	86.6	.....	12.3	.....	.....	1.1	.....	.....
Printing and publishing:												
Book and job	44.3	.1	.3	.1	92.5	.....	7.0	.....	.....	.....	.....	.....
Newspaper	45.1	4.2	1.9	9.8	10.6	46.1	27.3	.....	.....	.....	.....	.....
Average	43.9	.2	37.5	.7	41.4	3.5	8.3	1.6	1.8	1.2	3.6	.1

[1] Less than one-tenth of 1 per cent.

Trend of Union Wages and Hours

As TABLE 3 shows, the average hourly union wage rate on May 15, 1930, was higher than in any preceding year, being slightly more than 3.8 per cent higher than on the same date in 1929, 138.3 per cent higher than in 1917, 172.1 per cent higher than in 1913, 188.2 per cent higher than in 1910, and 203.3 per cent higher than in 1907. In other words, the average union wage rate per hour was more than three times as much in 1929 as in 1907 and nearly two and three-quarters times as much as in 1913.

Figured on the weekly basis, the rates in 1930 were 1.3 per cent higher than in 1929, 116.9 per cent higher than in 1917, 143.8 per cent higher than 1913, 156.1 per cent higher than in 1910, and 166.4 per cent higher than in 1907. Because of reductions in hours of labor, weekly rates have not increased to the same extent as hourly rates. In 1930 the regular hours of labor were 1.9 per cent lower than in 1929, 8.7 per cent lower than in 1917, 10.2 per cent lower than in 1913, 11.2 per cent lower than in 1910, and 12.5 per cent lower than in 1907.

The index numbers shown in Table 3 are computed on the basis of 1913 as 100. These indexes include all the time-work trades and all cities covered in preceding years, but the number of trades and cities included in the data has varied from year to year.

TABLE 3.—INDEX NUMBERS OF UNION WAGE RATES AND HOURS OF LABOR IN THE UNITED STATES AS OF MAY EACH YEAR, 1907 TO 1930

[1913=100]

Year	Index numbers of—			Year	Index numbers of—		
	Rate of wages per hour	Hours per full-time week	Rate of wages per full-time week		Rate of wages per hour	Hours per full-time week	Rate of wages per full-time week
1907	89.7	102.6	91.5	1919	154.5	94.7	147.8
1908	91.0	102.1	92.5	1920	199.0	93.8	188.5
1909	91.9	101.9	93.3	1921	205.3	93.9	193.3
1910	94.4	101.1	95.2	1922	193.1	94.4	183.0
1911	96.0	100.7	96.5	1923	210.6	94.3	198.6
1912	97.6	100.3	97.7	1924	228.1	93.9	214.3
1913	100.0	100.0	100.0	1925	237.9	93.0	222.3
1914	101.9	99.6	101.6	1926	250.3	92.8	233.4
1915	102.8	99.4	102.3	1927	259.5	92.4	240.8
1916	107.2	98.8	106.2	1928	260.6	91.9	240.6
1917	114.2	98.4	112.4	1929	262.1	91.5	240.7
1918	132.7	97.0	129.6	1930	272.1	89.8	243.8

Because of the wide interest in building operations and the resultant inquiries to the bureau for wage changes in building trades as a group, the data for these trades are given below.

Index numbers of union wage rates in the building trades

	Index number		Index number
1913	100.0	1922	187.5
1914	101.9	1923	207.3
1915	102.8	1924	224.0
1916	106.2	1925	232.7
1917	112.8	1926	248.0
1918	125.2	1927	256.7
1919	145.4	1928	258.1
1920	196.8	1929	261.6
1921	200.3	1930	272.8

Table 4 shows the average union wage rates per hour, average full-time working hours per week, the number of returns on which 1930 averages are based, and index numbers of hourly rates for the years 1925 to 1930. The index numbers for the years back to 1907 may be found in Bulletin No. 482 of this bureau, but are omitted here for want of space. For some trades data were not collected as early as 1913, hence there can be no index numbers for them on a 1913 base.

In computing an average rate, each rate quoted is multiplied by the number of union members having such rate. The products are added and the sum divided by the grand total membership; in other words, the rates are weighted by the number of union members. This membership is furnished the bureau for this sole purpose and is held strictly confidential.

The rates for a city may enter into an average one year because the trade has an effective wage scale, but may drop out the next year because the trade can not enforce its scale or because the union has disbanded. Also, the membership fluctuations in high or low rate cities have an important bearing on this weighted average rate. The grand average rate may, possibly, vary to a greater extent than the rate in any city reporting for both years or it may show a decrease while the individual rates composing it may show no change and some increases. The index numbers are computed from these averages. In Table 4 hourly rates only are considered. Equivalent weekly rates do not exactly parallel hourly rates because of changes in working hours.

TABLE 4.—NUMBER OF QUOTATIONS, AVERAGE WAGE RATES PER HOUR, 1929 AND 1930, AVERAGE FULL-TIME HOURS PER WEEK, 1930, AND INDEX NUMBERS OF HOURLY RATES FOR SELECTED YEARS BASED ON 1913

Trade	Number of quotations, May, 1930	Average rate of wages per hour		Index numbers of rates of wages per hour (1913=100)						Average hours per week, May, 1930
		May, 1929	May, 1930	May, 1925	May, 1926	May, 1927	May, 1928	May, 1929	May, 1930	
Bakery trades										
Bakers	270	$0.979	$0.965	293.4	277.2	286.8	285.9	293.4	289.2	47.3
Building trades										
Asbestos workers	38	1.378	1.445	(1)	(1)	(1)	(1)	(1)	(1)	41.9
Bricklayers	66	1.657	1.695	213.4	226.4	231.9	233.9	239.7	245.1	41.7
Sewer, tunnel and caisson	14	1.917	1.913	187.1	199.2	218.6	214.3	199.5	199.1	41.7
Building laborers	48	.862	.919	231.6	254.9	255.8	257.0	258.2	275.3	43.8
Carpenters	66	1.339	1.390	222.8	238.4	246.7	247.5	252.0	261.6	42.4
Millwrights	24	1.244	1.303	(1)	(1)	(1)	(1)	(1)	(1)	43.2
Parquetry floor layers	23	1.375	1.475	215.7	253.1	250.2	236.1	241.9	259.5	40.8
Wharf and bridge	21	1.293	1.360	(1)	(1)	(1)	(1)	(1)	(1)	42.0
Cement finishers	59	1.366	1.493	212.6	226.9	236.8	234.6	234.6	256.4	42.1
Composition roofers	38	1.358	1.387	(1)	(1)	(1)	(1)	(1)	(1)	41.9
Helpers	6	.795	.796	(1)	(1)	(1)	(1)	(1)	(1)	43.5
Elevator constructors	46	1.450	1.519	(1)	(1)	(1)	(1)	(1)	(1)	42.4
Helpers	45	1.043	1.093	(1)	(1)	(1)	(1)	(1)	(1)	42.2
Engineers, portable and hoisting	126	1.430	1.593	205.7	217.2	224.2	233.5	232.5	259.0	43.2
Glaziers	35	1.358	1.408	(1)	(1)	(1)	(1)	(1)	(1)	42.1
Hod carriers	46	1.072	1.106	251.5	273.8	280.4	280.7	293.0	302.3	41.8
Inside wiremen	64	1.468	1.484	232.4	244.6	255.0	257.2	268.2	271.1	41.7
Fixture hangers	13	1.253	1.338	220.8	234.7	232.7	235.8	241.8	258.2	40.7
Lathers:										
Piece work	18	[2]9.717	[2]9.424	(1)	(1)	(1)	(1)	(1)	(1)	40.2
Time work	71	1.484	1.546	234.5	240.6	250.3	251.0	249.0	259.4	40.6

[1] No data for 1913. [2] Per 1,000 laths.

TABLE 4.—AVERAGE WAGE RATES PER HOUR, 1929 AND 1930, AVERAGE FULL-TIME HOURS PER WEEK, 1930, AND INDEX NUMBERS OF HOURLY RATES FOR SELECTED YEARS BASED ON 1913—Continued

Trade	Number of quotations, May, 1930	Average rate of wages per hour		Index numbers of rates of wages per hour (1913=100)						Average hours per week, May, 1930
		May, 1929	May, 1930	May, 1925	May, 1926	May, 1927	May, 1928	May, 1929	May, 1930	
Building trades—Continued										
Marble setters	52	$1.558	$1.565	190.0	212.3	217.0	218.0	233.4	234.5	41.6
Helpers	17	1.061	1.046	222.5	246.7	245.2	248.0	262.8	259.1	42.2
Mosaic and terazzo workers	30	1.417	1.468	(1)	(1)	(1)	(1)	(1)	(1)	41.7
Painters	65	1.369	1.467	243.1	257.5	266.2	270.8	270.2	289.5	40.8
Fresco	13	1.258	1.380	220.0	220.1	245.1	226.7	231.0	253.4	40.6
Sign	48	1.583	1.581	241.5	240.4	247.2	247.5	249.9	249.6	41.6
Plasterers	65	1.612	1.691	219.8	236.1	241.0	241.6	238.6	250.3	40.6
Laborers	43	1.090	1.161	243.1	257.2	259.7	264.1	265.0	282.3	41.0
Plumbers and gas fitters	66	1.450	1.488	206.6	222.7	227.2	232.1	233.8	240.0	42.4
Laborers	13	1.043	1.013	(1)	(1)	(1)	(1)	(1)	(1)	41.6
Sheet-metal workers	52	1.355	1.416	229.3	244.8	252.2	247.4	256.9	268.5	42.2
Ship carpenters	8	1.111	1.404	(1)	(1)	(1)	(1)	(1)	(1)	41.8
Slate and tile roofers	26	1.554	1.590	(1)	(1)	(1)	(1)	(1)	(1)	42.7
Steam and sprinkler fitters	78	1.444	1.511	212.2	229.7	236.2	239.5	241.0	252.2	41.7
Helpers	40	.954	1.065	273.7	289.7	302.8	309.2	305.0	340.6	40.4
Stonemasons	58	1.627	1.626	229.5	253.1	256.0	259.3	266.5	266.4	41.4
Structural-iron workers	73	1.467	1.542	204.5	218.5	235.5	235.7	236.0	248.1	42.5
Finishers	35	1.492	1.599	197.9	220.7	228.5	230.2	240.0	257.2	41.9
Tile layers	58	1.469	1.539	202.3	212.0	221.9	221.8	224.2	234.9	41.5
Helpers	21	.984	1.079	248.9	269.8	272.9	278.5	274.3	300.8	44.6
Average, building trades	1,728	[2] 1.352	[3] 1.410	232.7	248.0	256.7	258.1	261.6	272.8	41.9
Chauffeurs and teamsters and drivers										
Chauffeurs	457	.709	.724	223.5	226.3	242.1	243.2	244.2	249.4	53.4
Teamsters and drivers	142	.734	.766	254.3	256.6	269.1	277.1	279.8	292.0	53.7
Average, chauffeurs, etc.	599	.715	.732							53.7
Granite and stone trades										
Granite cutters	57	1.279	1.343	216.8	244.1	242.6	245.3	249.8	262.3	42.8
Stone cutters	50	1.472	1.486	221.9	241.9	241.2	242.2	253.6	256.0	42.7
Average, granite and stone trades	107	1.369	1.412							42.2
Miscellaneous trades										
Laundry workers	52	.458	.479	(1)	(1)	(1)	(1)	(1)	(1)	48.0
Linemen	43	1.019	1.128	(1)	(1)	(1)	(1)	(1)	(1)	45.1
Longshoremen	48	.863	.875	239.9	242.0	236.7	248.6	250.1	253.5	44.6
Printing and publishing: Book and job										
Bindery women	53	.529	.544	250.5	235.6	251.5	252.9	254.9	262.1	44.8
Bookbinders	80	1.002	1.015	236.6	240.8	246.0	244.8	247.5	250.7	44.9
Compositors	67	1.127	1.162	237.4	242.1	246.6	250.1	251.5	259.3	44.0
Electrotypers	58	1.261	1.293	249.7	252.2	255.2	257.1	263.2	269.9	44.8
Machine operators	61	1.188	1.240	211.7	215.2	223.0	224.6	228.0	238.0	43.9
Machine tenders (machinists)	26	1.195	1.267	210.4	219.9	227.1	216.8	219.9	233.2	44.0
Machinist-operators	39	1.125	1.116	183.7	179.2	189.6	176.6	185.7	184.3	43.7
Photo-engravers	50	1.331	1.335	(1)	(1)	(1)	(1)	(1)	(1)	43.9
Press assistants and feeders	146	.850	.865	278.8	281.9	285.3	287.0	289.7	294.8	44.2
Pressmen:										
Cylinder	156	1.150	1.166	225.9	230.5	230.8	232.7	236.8	240.1	44.3
Platen	113	.939	.947	244.3	255.8	258.3	253.9	257.8	259.9	44.5
Average, book and job	849	1.049	1.074							44.3
Printing and publishing: Newspaper										
Compositors:										
Day work	83	1.203	1.210	193.9	196.7	201.8	206.6	211.3	212.5	45.5
Night work	72	1.326	1.315	187.4	193.4	199.7	203.0	205.3	203.6	45.1

[1] No data for 1913.

[3] Not including piece workers.

TABLE 4.—AVERAGE WAGE RATES PER HOUR, 1929 AND 1930, AVERAGE FULL-TIME HOURS PER WEEK, 1930, AND INDEX NUMBERS OF HOURLY RATES FOR SELECTED YEARS BASED ON 1913—Continued

Trade	Number of quotations, May, 1930	Average rate of wages per hour		Index numbers of rates of wages per hour (1913=100)						Average hours per week, May, 1930
		May, 1929	May, 1930	May, 1925	May, 1926	May, 1927	May, 1928	May, 1929	May, 1930	
Printing and publishing: Newspaper—Continued										
Machine operators, day work:										
Piece work	8	[4]$0.138	[4]$0.145	135.8	138.5	134.9	138.5	124.1	130.4	43.5
Time work	86	1.224	1.220	198.0	201.6	208.9	213.8	217.4	216.7	45.0
Machine operators, night work:										
Piece work	8	[4].147	[4].156	113.7	118.6	112.3	108.1	103.2	109.5	43.6
Time work	72	1.336	1.333	189.5	195.7	196.9	205.9	207.5	207.0	44.8
Machine tenders (machinists):										
Day work	68	1.186	1.206	185.3	185.2	194.5	198.4	201.7	205.1	45.5
Night work	59	1.340	1.308	178.4	176.5	187.1	190.8	196.6	191.9	45.1
Machinist-operators:										
Day work	11	1.048	1.081	178.7	171.9	177.2	179.2	173.5	179.0	46.4
Night work	9	1.189	1.203	156.8	161.1	174.9	175.8	172.7	174.8	46.0
Photo-engravers:										
Day work	43	1.346	1.342	[1]	[1]	[1]	[1]	[1]	[1]	43.9
Night work	37	1.596	1.636	[1]	[1]	[1]	[1]	[1]	[1]	41.5
Pressmen, web presses:										
Day work	120	1.089	1.095	208.2	212.2	223.3	224.9	228.1	229.3	46.8
Night work	102	1.257	1.272	200.6	198.5	209.7	215.7	216.1	218.7	42.6
Stereotypers:										
Day work	60	1.055	1.064	184.5	188.1	191.0	191.0	200.1	201.8	46.7
Night work	56	1.201	1.228	188.4	187.9	188.4	188.6	198.3	202.8	42.7
Average, newspaper	894	1.241	1.241							45.0
Grand average	4,590	[3]1.204	[3]1.250	237.9	250.3	259.5	260.6	262.1	272.1	43.9

[1] No data for 1913. [3] Not including piece workers. [4] Per 1,000 ems.

Table 5 shows the per cent of increase in weekly wage rates in 1930 as compared with specified years, beginning with 1907, the earliest year for which data are available. For lack of space the years 1908 to 1912, inclusive, 1914 to 1916, inclusive, 1918, 1920 ,1922, 1924, and 1926 are omitted. The figures are not index numbers, but may be converted into index numbers. The first line of the table shows that the weekly rate of bakers in 1930 was 202.2 per cent higher than in 1907, or more than three times as much in 1930 as in 1907. Read as index numbers and taking 1907 as 100, the index number for 1930 is 302.2. If 1913 is taken as the base (100), then 1930 index number is 257.1.

In all the 34 trade classifications for which data reach back that far weekly rates more than doubled between 1907 and 1930 and three more than trebled.

Comparing 1930 wages per full-time week with those of 1929 the changes noted in individual trades are as follows: Bakers' wage rates show a decrease of 1.2 per cent. In the building trades 23 occupations show increases, while 15 show decreases and 1 no change. The increases ranged from less than one-tenth of 1 per cent for bricklayers and wharf and bridge carpenters to 18.7 per cent for ship carpenters. Decreases in rates in the building trades ranged from one-tenth of 1 per cent for parquetry floor layers, glaziers, and steam and sprinkler fitters to 7.8 per cent for plumbers' laborers. Chauffeurs' wage

rates increased two-tenths of 1 per cent, while those of teamsters and drivers increased 4.8 per cent. Wages in the granite and stone trades decreased—those of granite cutters five-tenths of 1 per cent and those of stonecutters 2.4 per cent. Laundry workers' wages increased 4.6 per cent, those of linemen 7 per cent, and those of longshoremen 1.2 per cent. In book and job printing all occupations except machinist-operators show an increase in wages, ranging from one-tenth of 1 per cent for photo-engravers to 6.1 per cent for machine tenders. In newspaper printing nine occupations showed increases ranging from eight-tenths of 1 per cent for compositors on daywork and machinist-operators on night work to 2.6 per cent for photo-engravers on night work and five occupations showed decreases ranging from two-tenths of 1 per cent for compositors on night work and machine operators on night work to 2.7 per cent for machine tenders on night work.

TABLE 5.—PER CENT OF INCREASE IN RATES OF WAGES PER FULL-TIME WEEK IN 1930 AS COMPARED WITH SPECIFIED PRECEDING YEARS

Occupation	Per cent of increase in rates of wages per full-time week in 1930 as compared with—									
	1907	1913	1917	1919	1921	1923	1925	1927	1928	1929
Bakery trades										
Bakers	202.2	157.1	125.2	49.2	3.4	4.0	[1] 1.7	[1] 0.3	1.0	[1] 1.2
Building trades										
Asbestos workers	------	------	133.6	74.3	32.7	37.0	18.0	5.2	4.6	.9
Bricklayers	136.7	128.6	115.0	80.4	34.0	21.1	8.6	.4	[1] .4	([2])
Sewer, tunnel, and caisson	------	88.8	82.6	66.7	23.3	18.4	1.0	[1] 12.6	[1] 11.7	[1] 4.1
Building laborers	165.5	148.2	122.4	70.8	18.4	23.5	16.6	5.0	4.7	4.2
Carpenters	170.8	148.4	116.7	73.1	27.6	23.2	12.8	1.9	2.2	.4
Millwrights	------	------	88.5	45.4	13.2	8.8	8.0	[1] 8.3	[1] .3	4.7
Parquetry-floor layers	------	126.7	94.7	60.2	9.6	8.9	12.4	[1] 3.6	2.7	[1] .1
Wharf and bridge	------	------	124.7	91.4	31.2	29.8	9.9	[1] 2.0	[1] .9	([2])
Cement finishers	151.8	133.5	119.8	79.7	28.9	27.3	14.6	3.2	4.9	4.8
Composition roofers	------	------	142.5	93.1	30.8	27.7	13.0	1.2	[1] 1.0	[1] 2.3
Helpers	------	------	90.9	57.9	12.5	13.1	3.5	4.9	[1] 2.1	([3])
Elevator constructors	------	------	117.0	76.5	30.0	31.0	11.5	2.0	1.1	1.2
Helpers	------	------	141.7	88.3	29.3	29.5	12.4	1.2	[1] .6	[1] .7
Engineers, portable and hoisting	------	138.6	124.9	84.1	39.8	35.7	21.7	9.1	6.5	6.7
Glaziers	------	------	------	93.8	36.8	29.2	10.4	1.5	[1] .7	[1] .1
Hod carriers	189.1	180.8	140.6	76.7	19.0	31.0	12.6	.8	[1] .7	2.7
Inside wiremen	177.1	148.6	122.3	75.8	27.0	30.2	10.4	.8	[1] .3	[1] 1.2
Fixture hangers	------	129.0	100.4	65.3	17.9	16.1	7.8	2.9	1.7	1.2
Lathers	------	134.6	115.7	80.5	24.9	19.9	2.2	[1] 3.3	[1] 3.1	[1] 1.8
Marble setters	140.0	119.5	114.9	84.6	37.7	24.3	16.5	2.1	1.6	[1] 5.2
Helpers	------	146.5	130.8	93.4	14.6	14.0	10.9	.7	[1] .4	[1] 6.1
Mozaic and terrazzo workers	------	------	140.4	114.4	41.3	42.0	14.3	7.9	3.1	[1] 1.8
Painters:										
Building	200.8	162.3	126.4	76.2	29.5	25.6	12.5	3.9	5.2	5.7
Fresco	------	134.7	102.5	66.6	23.0	22.5	14.7	1.4	10.2	8.9
Sign	------	131.7	118.6	66.7	19.7	14.2	1.2	[1] 1.3	[1] 1.3	[1] .6
Plasterers	136.9	127.9	115.5	77.6	29.3	20.0	5.8	.1	[1] .7	2.8
Laborers	182.7	159.1	133.2	78.0	20.1	24.0	8.3	5.5	3.4	3.0
Plumbers and gas fitters	144.4	121.3	109.8	69.3	24.6	21.6	9.2	[1] .6	[1] 2.7	[1] 2.4
Laborers	------	------	------	53.9	12.7	8.1	[1] .3	[1] 1.4	[1] .3	[1] 7.8
Sheet-metal workers	185.9	149.4	125.6	76.7	26.4	26.7	11.6	1.7	4.0	[1] .2
Ship carpenters	------	------	114.7	59.5	43.8	39.7	48.6	53.2	46.9	18.7
Slate and tile roofers	------	------	129.9	85.2	30.5	22.5	5.8	[1] 2.2	[1] 2.4	[1] 2.4
Steam and sprinkler fitters	166.5	133.0	114.2	76.2	39.8	36.3	12.8	1.6	[1] .1	[1] .1
Helpers	261.0	205.8	172.2	98.8	41.7	29.8	13.9	3.0	1.1	2.6
Stone masons	160.6	146.5	125.7	84.7	29.0	17.3	8.8	[1] 2.5	[1] 3.7	[1] 3.1
Structural-iron workers	161.9	135.7	116.1	67.3	29.7	33.7	16.7	1.3	1.3	1.6
Finishers	------	144.8	125.7	78.9	33.5	39.9	24.5	7.0	6.3	2.2
Tile layers	------	117.1	104.7	82.9	36.7	27.1	9.4	[1] .3	([2])	[1] .9
Helpers	------	175.8	155.1	105.6	22.9	27.0	13.5	3.5	1.5	3.4

[1] Decrease. [2] Less than one-tenth of 1 per cent increase. [3] No change.

TABLE 5.—PER CENT OF INCREASE IN RATES OF WAGES PER FULL-TIME WEEK IN 1930 AS COMPARED WITH SPECIFIED PRECEDING YEARS—Continued

Occupation	Per cent of increase in rates of wages per full-time week in 1930 as compared with—									
	1907	1913	1917	1919	1921	1923	1925	1927	1928	1929
Chauffeurs and teamsters and drivers										
Chauffeurs	.....	99.6	82.9	37.1	14.4	15.1	3.7	[1]0.4	[1]0.7	0.2
Teamsters and drivers	.....	159.3	130.8	64.5	30.0	28.6	16.3	8.0	4.9	4.8
Granite and stone trades										
Granite cutters	168.5	147.2	126.9	61.3	18.9	17.0	14.3	2.2	1.1	[1].5
Stonecutters	153.5	144.0	121.6	76.3	30.4	24.7	11.2	2.5	2.1	[1]2.4
Miscellaneous										
Laundry workers	.....	.....	91.4	47.6	15.3	15.5	7.9	11.3	7.2	4.6
Linemen	.....	.....	.....	.....	16.5	20.6	15.9	10.7	9.6	7.0
Longshoremen	.....	92.3	61.6	29.0	6.2	12.0	3.1	7.0	1.9	1.2
Printing and publishing, book and job										
Bindery women	.....	.....	127.2	57.4	6.5	7.1	4.4	4.3	3.6	2.8
Bookbinders	150.4	133.7	115.9	50.7	12.5	12.0	6.0	2.4	2.3	1.4
Compositors	168.4	138.5	122.2	64.6	15.5	14.1	9.4	5.3	3.8	3.3
Electrotypers	186.7	157.9	128.0	89.4	19.8	11.0	6.6	4.3	3.5	1.4
Machine operators	138.7	119.4	110.4	60.3	18.5	16.7	12.2	6.7	6.0	4.4
Machine tenders	.....	114.4	107.0	53.4	17.2	16.4	10.8	2.8	7.7	6.1
Machinist-operators	.....	73.1	66.9	40.4	11.0	8.1	[1].6	[1]3.5	3.8	[1]1.3
Photo-engravers	.....	.....	117.1	76.2	30.1	27.8	16.3	4.5	1.6	.1
Press assistants and feeders	202.6	171.1	146.1	63.7	18.0	10.3	5.6	3.2	2.7	1.8
Pressmen:										
Cylinder	149.9	120.7	108.6	55.8	14.3	10.1	6.0	3.9	3.1	1.4
Platen	162.1	140.1	119.8	62.6	10.0	9.8	5.8	.9	2.5	.8
Printing and publishing, newspaper										
Compositors:										
Day work	133.3	109.3	100.1	59.7	20.0	16.6	8.4	4.3	2.5	.8
Night work	117.3	102.6	95.7	55.5	18.2	12.3	8.1	2.1	.6	[1].2
Machine operators:										
Day work	132.5	112.5	102.5	59.8	22.1	15.7	8.4	3.4	1.2	[1].4
Night work	120.0	106.2	97.7	56.4	21.4	15.2	9.1	5.1	.7	[1].2
Machine tenders (machinists):										
Day work	.....	102.7	97.9	47.2	13.9	11.6	9.1	4.3	2.5	1.2
Night work	.....	90.0	86.3	40.8	11.2	9.1	6.2	2.2	[1].3	[1]2.7
Machinist-operators:										
Day work	.....	76.5	70.0	57.8	9.6	7.7	4.8	.8	1.3	1.5
Night work	.....	81.3	76.2	53.0	13.5	15.3	10.7	1.0	1.1	.8
Photo-engravers:										
Day work	.....	.....	108.1	68.5	26.6	22.7	13.7	5.8	.1	[1].6
Night work	.....	.....	121.5	73.0	32.7	25.0	17.3	5.5	3.5	2.6
Pressmen, web presses:										
Day work	155.2	127.3	117.9	65.9	23.4	22.2	9.7	2.5	1.8	.5
Night work	138.6	127.2	120.1	64.1	24.0	22.3	9.9	4.3	1.6	1.0
Stereotypers:										
Day work	126.3	98.2	89.1	61.5	16.9	13.7	8.0	5.1	4.4	.9
Night work	119.2	99.7	91.4	63.2	16.9	13.5	8.7	6.4	5.8	1.1

[1] Decrease.

Recent Changes in Wages and Hours of Labor

INFORMATION received by the bureau regarding recent wage changes is presented below in two distinct groups: Part 1 relates to manufacturing establishments that report monthly figures regarding volume of employment; while part 2 presents data obtained from new trade agreements and other miscellaneous sources. Although the effort is made to avoid duplication of data as between parts 1 and 2 it is not always possible to do so.

Part I.—Wage Changes in Manufacturing Industries

SIX ESTABLISHMENTS in four industries reported wage-rate increases during the month ending September 15. These increases averaged 4.3 per cent and affected 121 employees, or 14 per cent of all employees in the establishments concerned. Eighty-seven establishments in 29 industries reported wage-rate decreases during the same period. These decreases averaged 9.7 per cent and affected 10,884 employees, or 70 per cent of all employees in the establishments concerned. Of the 87 wage-rate decreases, 15 were in sawmills and affected 2,667 employees, and 11 were in hosiery and knit goods mills and affected 1,525 employees.

WAGE CHANGES OCCURRING BETWEEN AUGUST 15, 1930, AND SEPTEMBER 15, 1930

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees: In establishments reporting increase or decrease in wage rates	Per cent of employees: In all establishments reporting
			Increases				
Paper and pulp	210	2	7.0–10.0	7.6	32	26	(1)
Printing, book and job	447	1	2.2	2.2	50	16	(1)
Printing, newspapers	415	2	1.0– 4.2	2.1	33	9	(1)
Brick, tile, and terra cotta	640	1	10.0–20.0	16.7	6	18	(1)
			Decreases				
Slaughtering and meat packing	200	1	10.0	10.0	160	54	(1)
Flour	353	2	10.0	10.0	14	74	(1)
Cotton goods	457	4	6.0–10.0	9.1	1,051	98	
Hosiery and knit goods	360	11	7.0–16.7	11.2	1,525	85	
Silk goods	259	3	10.0	10.0	122	67	(1)
Woolen and worsted goods	188	1	12.5	12.5	114	100	(1)
Carpets and rugs	30	2	10.0	10.0	41	22	(1)
Shirts and collars	115	2	10.0–12.5	11.2	779	100	
Clothing, women's	413	1	10.0	10.0	206	59	
Iron and steel	203	5	1.5– 5.0	3.5	613	33	(1)
Structural ironwork	176	1	7.0	7.0	14	50	(1)
Foundry and machine shop products	1,067	6	10.0–20.0	12.9	531	61	(1)
Steam fittings and steam and hot-water heating apparatus	109	2	10.0	10.0	40	6	(1)
Lumber, sawmills	618	15	6.0–11.0	9.1	2,667	91	
Lumber, millwork	338	4	7.0–10.0	9.3	157	94	
Furniture	412	4	10.0	10.0	604	100	
Leather	136	2	10.0	10.0	457	100	
Boots and shoes	312	3	10.0	10.0	333	100	(1)
Paper and pulp	210	1	10.0	10.0	59	9	(1)
Paper boxes	190	2	10.0	10.0	25	19	(1)
Printing, book and job	447	1	10.0	10.0	29	100	(1)
Printing, newspapers	415	1	7.0	7.0	140	85	(1)
Fertilizers	176	1	14.0	14.0	26	84	(1)
Brick, tile, and terra cotta	640	4	10.0–18.0	11.1	190	95	
Cigars and cigarettes	205	1	10.0	10.0	700	96	
Pianos and organs	68	2	10.0	10.0	128	95	
Rubber boots and shoes	9	1	7.0	7.0	131	16	
Aircraft	42	2	10.0–15.0	11.9	13	100	(1)
Jewelry	118	2	6.0– 8.0	7.2	15	52	(1)

[1] Less than one-half of 1 per cent.

Part 2.—Wage Changes Reported by Trade-Unions since July 1, 1930

WAGE and hour changes reported in part 2 principally concern union workers. Since July 1, 1930, changes of wages or hours were reported for 11,329 workers, of whom 1,507 had adopted the 5-day week.

Changes in wages of building trades were all increases, ranging from 5 to 15 cents per hour. Printing trades reported increases ranging from $1 to $8 per week. Chauffeurs and teamsters, motion-picture operators, and upholsterers also reported increases.

Six reductions were reported—2 in clothing, 1 in metal trades, 2 in textiles, and 1 of printing pressmen.

UNION WAGE CHANGES, JULY TO OCTOBER, 1930, BY INDUSTRY, OCCUPATION, AND LOCALITY

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Barbers, New York City	Aug. 18	*Per week* (1)	*Per week* [2] $25.00	[3] 15	[3] 12
Building trades:		*Per hour*	*Per hour*		
Carpenters, Miami, Fla	Aug. 1	(4)	(4)	44	40
Cement finishers, Kansas City	July 1	$1.25	$1.31¼	44	40
Electrical workers—					
Dover, N. J	July 22	1.50	1.65	44	40
Morristown, N. J	do	1.50	1.65	44	40
Summit, N. J., and vicinity	do	1.50	1.65	44	40
Somerset County, N. J	do	1.50	1.65	44	40
Helpers—					
Morris County, N. J	July 1	.58⅓	.63⅓	44	40
Somerset County, N. J	do	.58⅓	.63⅓	44	40
Union County, N. J	do	.58⅓	.63⅓	44	40
Hod carriers—					
Boston, Mass	Aug. 18	1.00	1.05	44	40
Lee, Mass	do	1.00	1.05	44	40
Lenox, Mass	do	1.00	1.05	44	40
Pittsfield, Mass	do	1.00	1.05	44	40
Lathers, Washington, D. C	Oct. 1	1.50	1.62½	40	40
Roofers, Rochester, N. Y	do	1.05	1.10	44	40
Sheet-metal workers, Buffalo, N. Y	do	1.25	1.30	44	44
Chauffeurs and teamsters:		*Per day*	*Per day*		
Chauffeurs, San Francisco, Calif	Aug. 25	$4.00	$4.25	60	60
Drivers, loaders, and checkers—		*Per week*	*Per week*		
Alameda, Calif	July 10	$48.00	$49.00	48	48
Berkeley, Calif	do	48.00	49.00	48	48
Oakland, Calif	do	48.00	49.00	48	48
Richmond, Calif	do	48.00	49.00	48	48
Clothing:					
Neckwear cutters, New York City	Sept. 1	62.00	60.00	44	44
Shirt operating, etc., New York City	(5)	(5)	(5)	(5)	(5)
Upholsterers:					
Chicago, Ill	July 1	(6)	(7)	[3] 8½	[3] 8½
Mattress makers:					
New York City	Sept. 1	(4)	(4)	44	40
Long Island, N. Y	do	(4)	(4)	44	40
Metal trades: Machinists, Butte, Mont	July 21	*Per day* $9.00	*Per day* $8.00	48	48
Motion-picture operators, actors, and theatrical workers:					
Projectionists—					
New Orleans, La.—		*Per week*	*Per week*		
Commercial houses	Sept. 1	$52.50 to 55.12	$55.12 to 57.88	[3] 6½	[3] 6½
Suburban houses	do	[8] 4.20 to 5.25	[8] 4.41 to 5.51	[8] 4½	[8] 4½
Washington, D. C	do	(4)	40.00 to 105.00	(4)	40
Musicians, New Orleans, La	do	36.00 to 66.40	38.00 to 69.76	25½	25½

[1] 50 per cent of receipts.
[2] And 50 per cent of receipts over $40.
[3] Per day.
[4] Not reported.
[5] Reduction of 7½ per cent.
[6] Piecework.
[7] Increase of 16⅔ per cent.
[8] Per night.

UNION WAGE CHANGES, JULY TO OCTOBER, 1930, BY INDUSTRY, OCCUPATION, AND LOCALITY—Continued

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Printing and publishing:					
Compositors—					
Akron, Ohio—		*Per week*	*Per week*		
Newspaper, day	Oct. 25	$53.50	$55.00	48	48
Newspaper, night	do	56.50	58.00	48	48
Boonville, Mo.—					
Job work	July 10	27.00	35.00	48	44
Newspaper	do	29.00	35.00	48	48
Columbia, Mo.—					
Job work	do	27.00	35.00	48	44
Newspaper	do	29.00	35.00	48	48
Danville, Ill.—					
Newspaper, day	Oct. 1	46.00	47.00	48	48
Newspaper, night	do	48.00	49.00	48	48
Des Moines, Iowa—					
Job work, day	do	44.00	45.00	44	44
Job work, night	do	47.50	48.50	44	44
Las Vegas, N. Mex.—					
Newspaper, day	Sept. 1	37.50	37.50	48	46
Newspaper, night	do	40.00	40.00	48	46
Meriden, Conn.—					
Newspaper, day	Aug. 15	41.00	42.00	48	48
Newspaper, night	do	44.00	45.00	48	48
Racine, Wis.—newspaper	Oct. 1	50.00	51.00	48	48
Richmond, Calif.—					
Job work, day	July 1	48.00	49.00	44	44
Job work, night	do	51.00	52.00	44	44
Newspaper, day	do	50.00	51.00	45	45
Newspaper, night	do	53.00	54.00	45	45
Pressman: Des Moines, Iowa	Aug. 1	50.00	41.67	48	40
Stereotypers, Springfield, Ohio—		*Per day*	*Per day*		
Day work	Oct. 1	$7.83⅓	$8.00	47	47
Night work	do	8.33⅓	8.50	46	46
Street railway employees: Conductors, motormen, etc., Detroit, Mich	July 1	(4)	(4)	56	48
Municipal workers: Laborers, road construction, Lansing, Mich	July 1	[9].40	[9].40	60	50
Textiles:					
Weavers, loom fixers, etc.—		*Per week*	*Per week*		
Easton, Pa	July 15	$35.00	$31.00	50	50
Phillipsburg, N. J	do	35.00	31.00	50	50
Warpers—					
Easton, Pa	do	35.00	(10)	50	50
Phillipsburg, N. J	do	35.00	(10)	50	50

[4] Not reported. [9] Per hour. [10] Reduction of 15 per cent.

Entrance Wage Rates for Common Labor, July 1, 1930

THE term "common labor" has many interpretations among different industries and even among different localities or plants in the same industry. Also, many employers make a practice of increasing the rate of pay of a laborer after a stated length of service, provided a sufficient degree of fitness for the job has been developed; otherwise the employee is dropped. Owing to these difficulties in the way of securing comparable data as to wage rates for common labor, the Bureau of Labor Statistics has confined these statistics to entrance rates alone—that is, to rates of pay per hour for unskilled adult male common laborers when first hired.

This survey is limited to 13 important industries, which require considerable numbers of common laborers. Some establishments have reported two rates—for example, one for the 10-hour day and one for the 8-hour day, or one for white and one for colored or Mexican workers; these distinctions have not been maintained in the tabulated data, although it is apparent that the lowest rates shown are for those

geographic divisions where there are large numbers of colored or Mexican workers, while the highest rates shown are for localities where an 8-hour day is more or less prevalent.

The industries included in this survey and the number of common laborers employed at entrance rates in the establishments reporting in each specified industry, on July 1, 1930, were as follows:

Automobiles	3, 171
Brick, tile, and terra cotta	3, 620
Cement	1, 439
Electrical machinery, apparatus, and supplies	2, 967
Foundry and machine-shop products	6, 565
Iron and steel	20, 975
Leather	2, 848
Lumber (sawmills)	9, 172
Paper and pulp	8, 578
Petroleum refining	4, 413
Slaughtering and meat packing	5, 857
Public utilities	13, 266
General contracting	33, 130
Total	116, 001

The number of common laborers employed at entrance rates in the establishments reporting in each of the nine geographic divisions of the United States on July 1, 1930, was as shown below:

New England	7, 781
Middle Atlantic	30, 014
East North Central	27, 886
West North Central	13, 209
South Atlantic	9, 988
East South Central	5, 571
West South Central	6, 546
Mountain	4, 301
Pacific	10, 705
Total	116, 001

The weighted average entrance rate per hour for common labor for the several industries combined on July 1, 1930, was 43.1 cents. The general-contracting industry reported the highest rate, $1.25, in the Middle Atlantic division; while the lowest rate, 13.5 cents, was paid in the sawmill industry in the East South Central division.

The highest average rate per hour for any industry, 48.2 cents, appeared in the automobile industry, followed by 48.1 cents in petroleum refining and 47 cents in general contracting; the lowest average rate, 31.6 cents, appeared in the sawmill industry.

The highest average rate in the nine geographic divisions, 49.5 cents, appeared in the New England division. The Pacific, East North Central, and Middle Atlantic divisions showed average rates of 47.6, 47, and 46.1 cents, respectively. The lowest average rate, 26.7 cents, appeared in the East South Central division.

The weighted average entrance rates per hour for all industries represented in this study, including general contracting, have been as follows: July 1, 1926, 42.8 cents; July 1, 1927, 42.6 cents; July 1, 1928, 44.9 cents; July 1, 1929, 43.7 cents; July 1, 1930, 43.1 cents.

Omitting data for general contracting average entrance rates per hour for the periods studied have been: July 1, 1926, 40.9 cents; July 1, 1927, 40.4 cents; July 1, 1928, 44.1 cents; July 1, 1929, 42.1 cents; July 1, 1930, 41.6 cents.

The table following shows, for each industry included, the high, low, and average common-labor entrance rates per hour on July 1, 1930, in each geographic division and in the United States as a whole:

HOURLY ENTRANCE WAGE RATES FOR COMMON LABOR, JULY 1, 1930

[The rates on which this table is based are entrance rates paid for adult male common labor]

Industry	United States	Geographic division								
		New England [1]	Middle Atlantic [2]	East North Central [3]	West North Central [4]	South Atlantic [5]	East South Central [6]	West South Central [7]	Mountain [8]	Pacific [9]
Automobiles:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Low	35.0	-------	35.0	35.0	35.0	-------	-------	-------	-------	45.0
High	75.0	-------	75.0	75.0	75.0	-------	-------	-------	-------	55.0
Average	48.2	-------	46.4	48.7	45.2	-------	-------	-------	-------	49.7
Brick, tile, and terra cotta:										
Low	17.5	40.0	35.0	25.0	27.0	17.5	17.5	25.0	38.5	39.0
High	53.0	50.0	52.5	47.5	45.0	40.0	37.0	30.0	40.0	53.0
Average	38.0	43.0	44.5	43.1	34.6	25.8	26.8	27.4	38.7	46.5
Cement:										
Low	25.0	-------	38.0	35.0	35.0	-------	26.0	25.0	-------	34.0
High	50.0	-------	45.0	45.0	44.0	-------	36.0	28.0	-------	50.0
Average	37.9	-------	43.2	39.1	37.0	-------	31.3	27.3	-------	46.9
Electrical machinery, apparatus, and supplies:										
Low	35.0	35.0	38.0	39.0	35.0	-------	-------	-------	-------	-------
High	57.0	48.0	57.0	55.0	35.0	-------	-------	-------	-------	-------
Average	44.8	41.7	43.2	47.5	35.0	-------	-------	-------	-------	-------
Foundry and machine-shop products:										
Low	17.5	33.0	30.0	35.0	33.0	17.5	27.5	22.5	40.0	50.0
High	56.0	50.0	51.0	50.0	50.0	43.8	40.0	30.0	50.0	56.0
Average	39.0	40.2	41.0	43.0	41.1	27.7	33.4	25.9	42.3	52.0
Iron and steel:										
Low	20.0	40.0	30.0	35.0	35.0	20.0	23.5	-------	49.0	45.0
High	50.0	45.0	50.0	50.0	40.0	44.0	31.0	-------	49.0	50.0
Average	42.1	41.3	41.9	44.6	37.4	37.7	26.1	-------	49.0	47.0
Leather:										
Low	25.0	43.0	33.0	28.0	-------	25.0	25.0	-------	-------	43.5
High	60.0	54.2	50.0	60.0	-------	40.0	33.0	-------	-------	54.0
Average	41.9	46.9	44.7	42.0	-------	35.8	31.7	-------	-------	52.4
Lumber (sawmills):										
Low	13.5	33.3	30.0	27.5	30.0	16.0	13.5	20.0	35.0	32.0
High	75.0	38.0	35.0	75.0	37.5	35.0	25.0	25.0	45.0	50.0
Average	31.6	35.8	34.1	35.1	34.9	18.2	19.0	23.2	41.3	40.9
Paper and pulp:										
Low	20.0	36.7	35.0	31.5	35.0	38.3	20.0	25.0	-------	40.0
High	54.0	53.0	50.0	54.0	45.0	38.3	30.0	30.0	-------	51.3
Average	43.2	47.8	41.5	44.5	38.7	38.3	24.6	26.6	-------	42.8
Petroleum refining:										
Low	25.0	-------	45.0	45.0	50.0	28.0	32.5	25.0	45.0	53.0
High	62.0	-------	53.0	50.0	50.0	50.0	32.5	51.0	60.0	62.0
Average	48.1	-------	47.5	49.5	50.0	41.8	32.5	45.2	54.7	58.0
Slaughtering and meat packing:										
Low	25.0	38.0	42.5	40.0	37.5	40.0	-------	25.0	40.0	40.0
High	50.0	40.0	45.0	45.0	45.0	40.0	-------	37.5	40.0	50.0
Average	41.8	39.1	44.2	42.3	41.9	40.0	-------	34.5	40.0	42.7
Public utilities: [10]										
Low	20.0	35.0	37.5	32.5	30.0	20.0	25.0	25.0	35.0	28.0
High	67.5	61.5	61.3	67.5	38.0	50.0	40.0	40.0	42.0	60.0
Average	44.6	48.5	46.1	50.3	35.3	37.3	32.7	31.1	37.9	51.6

[1] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
[2] New Jersey, New York, Pennsylvania.
[3] Illinois, Indiana, Michigan, Ohio, Wisconsin.
[4] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
[5] Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.
[6] Alabama, Kentucky, Mississippi, Tennessee.
[7] Arkansas, Louisiana, Oklahoma, Texas.
[8] Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.
[9] California, Oregon, Washington.
[10] Includes street railways, gas works, waterworks, and electric power and light plants.

HOURLY ENTRANCE WAGE RATES FOR COMMON LABOR, JULY 1, 1930—Continued

Industry	United States	Geographic division								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
General contracting: [1]	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Low	15.0	40.0	35.0	30.0	25.0	15.0	20.0	22.0	30.0	40.0
High	125.0	85.0	125.0	97.5	87.5	60.0	50.0	50.0	62.5	75.0
Average	47.0	56.7	53.4	53.6	40.8	30.9	28.8	32.9	45.5	52.2
Total:										
Low	13.5	33.0	30.0	25.0	25.0	15.0	13.5	20.0	30.0	28.0
High	125.0	85.0	125.0	97.5	87.5	60.0	50.0	51.0	62.5	75.0
Average	43.1	49.5	46.1	47.0	40.6	32.1	26.7	33.0	45.2	47.6

[1] Includes building, highway, public works, and railroad construction.

Decline in Farm Wages

FARM wages on October 1 were at the lowest level since January, 1923, because of poor crop prospects, farm products price declines, and the fact that the supply of farm hands is more than 40 per cent in excess of the demand, according to the Bureau of Agricultural Economics, United States Department of Agriculture.

The bureau says that the excessive supply of farm hands "is a reflection of the continuance of the present extensive business depression which has scattered unemployed industrial workers throughout agricultural sections in search of a livelihood. The supply is in excess of the demand in all geographical sections, ranging from an excess of 24 per cent in the North Atlantic States to 49 per cent in the South Central States."

The combined index of farm wages on October 1 is placed at 150 per cent of the 1910–1914 pre-war level. This is a drop of 10 points since July 1 this year, and a drop of 24 points since October 1 a year ago. Wages declined from July 1 to October 1 this year, whereas in the past five years there has been an average seasonal advance of 2.6 points during this period.

Day wages of farm workers not provided with board now range from about $3.50 in the Northeastern industrial States, and $3.40 on the Pacific coast, down to $1.05 to $1.15 from South Carolina to Mississippi. The North Central States show an average of $2.60 per day, and the average for the country is $2.12. Farm workers provided with board are receiving an average of $1.61 per day, and $31.31 when hired by the month.

Store Opening and Closing Hours

AN INQUIRY into opening and closing hours in stores for the summer of 1930 in over 250 cities has been conducted by the domestic distribution department of the Chamber of Commerce of the United States and the results were recently published in a pamphlet entitled "Store opening and closing hours." The localities covered by the report include several of the largest cities in the country, some of medium size, and many small cities. Drug and confectionery

stores, whose practices as a rule differ from those in other lines, were not included in the survey.

Generally speaking, opening hours were found to range from 8.30 to 9 a. m., and closing hours from 5.30 to 6 p. m. Food stores usually open earlier in the morning and remain open later at night than other stores. However, they more frequently close for a half day each week in the summer months and they stand almost alone in year-round half-day closing. The week-day (Monday to Friday) closing time was reported as follows for 178 cities: 5 o'clock for 4, 5.30 for 70, 5.40 for 1, 6 for 101, and 8 for 2. The Saturday closing hours in 127 cities was given as 8 o'clock for 3, 9 for 82, 9.30 for 24, 10 for 17, and 11 for 1. The practice of keeping open evenings a few days before Christmas was common.

A general tendency toward a shorter working week for store employees in the summer was found. In a number of localities all of the stores closed a half hour or an hour earlier from Monday to Friday, the period covered ranging from one to five months. In a number of other places the practice was common but not general. In some summer resorts, however, stores which are never open at night during the winter months remain open until 9 or 10 o'clock during the resort season.

There were 125 cities in which some or all of the stores closed for a half day each week. In about 50 cities the practice was general and in many others nearly so. The period during which the half day was granted ranged from one to five months. Wednesday and Thursday were the days most frequently chosen for the half-day closing. In several cities all stores closed one full day each week. Even in cases where the stores remained open all day six days a week, a definite interest was frequently displayed in providing a half-day weekly vacation for the employees, part of whom were given the afternoon off on alternate days. This plan was in effect in all or a part of the stores in 46 cities.

Wages of Construction Workers in Nantes, France

A REPORT from Vice Consul Davis B. Levis, Nantes, France, dated July 23, 1930, gives the following wages for building workers in that city which were to be effective from June, 1930, to June, 1931.

WAGES OF CONSTRUCTION WORKERS IN NANTES, JUNE, 1930, TO JUNE, 1931

[Conversions on basis of franc=3.92 cents]

Occupation	Hourly wages		Occupation	Hourly wages	
	Francs	United States currency		Francs	United States currency
		Cents			*Cents*
Skilled workers	4.05	15.9	Painters	4.05	15.9
Stone cutters	4.10	16.1	Earth workers	3.50	13.7
Carpenters	4.10	16.1	Earth workers, under age	3.45	13.5
Roof workers	4.10	16.1	Laborers	3.45	13.5
Joiners	4.05	15.9	Laborers, under age	3.30	12.9
Plasterers	4.20	16.5			

Wages in the French Metal Industries in 1930

A WAGE study made by the employers' association in the metal-working industries and the machine trades of the region of Paris each year shows the average wages paid in the various occupations of the industry in that section of France.[1]

There has been a gradual increase in wages in most occupations, the report states, in the past three years. This increase, which averaged about 10 per cent from 1928 to 1929, amounted to an average of 15 per cent for all occupations from February, 1929, to February, 1930, and exceeded 20 per cent in the automobile, electrical construction, metal construction, and iron and steel industries.

The following table shows the average hourly wages of metal workers in different industries in January-February, 1930. The wages include all bonuses except family allowances.

AVERAGE HOURLY WAGES IN THE METAL INDUSTRIES IN THE REGION OF PARIS, FRANCE, IN JANUARY-FEBRUARY, 1930, BY OCCUPATION

[Conversions into United States currency on basis of franc=3.92 cents]

Industry and occupation	Average hourly wages			
	Time workers		Piece workers	
	Francs	*Cents*	*Francs*	*Cents*
Machine industries, general:				
Fitters	5.98	23.4	6.62	26.0
Fitters—tool makers	6.70	26.3	7.24	28.4
Blacksmiths	6.24	24.5	6.87	26.9
Milling-machine operators	6.22	24.4	6.95	27.2
Pattern makers	6.99	27.4	7.83	30.7
Mortising and planing machine hands	6.08	23.8	6.79	26.6
Lathe hands	6.21	24.3	6.98	27.4
Automobiles:				
Fitters	5.99	23.5	6.62	26.0
Fitters—tool makers	6.69	26.2	7.21	28.3
Coppersmiths	6.42	25.2	7.22	28.3
Milling machine operators	6.26	24.5	6.94	27.2
Milling machine hands—toolmakers	6.79	26.6	7.52	29.5
Machine setters	6.05	23.7	6.68	26.2
Lathe hands	6.23	24.4	6.98	27.4
Lathe and tool hands	6.89	27.0	7.48	29.3
Electrical construction:				
Fitters	5.88	23.0	6.55	25.7
Fitters—toolmakers	6.73	26.4	7.36	28.9
Electrical fitters	5.82	22.8	6.58	25.8
Coil winders	5.81	22.8	6.45	25.3
Electricians, factory installations	5.80	22.7	6.54	25.6
Electricians, outside installations	6.05	23.7		
Lathe hands	6.15	24.1	6.82	26.7
Lathe and tool hands	6.74	26.4	7.37	28.9
Metal construction:				
Structural-iron workers	6.29	24.7	6.75	26.5
Blacksmiths	6.65	26.1		
Locksmiths	6.35	24.9	6.74	26.4
Drop forging:				
Blacksmiths	5.93	23.2	6.81	26.7
Hammermen	7.12	27.9	7.94	31.1
Swagers			7.54	29.6
Metal-pipe manufacture:				
Draw-bench workers	5.14	20.1		
Pipe drawers	4.74	18.6	5.79	22.7
Iron and steel foundries:				
Molders, hand	6.24	24.5	7.32	28.7
Core makers	6.10	23.9	7.18	28.1
All industries:				
Laborers, male	4.22	16.5	4.71	18.5
Laborers, female	3.38	13.2	3.66	14.3
Skilled laborers, female	3.58	14.0	3.97	15.6

[1] Sous-secrétariat d'État de l'Économie Nationale. Bulletin de la statistique générale de la France Paris, Juillet-Septembre, 1930.

Earnings and Hours in Building Trades in Germany, August, 1929

THE Federal Statistical Office of Germany made an investigation of actual earnings and hours of labor of workers engaged in the building trades in Germany in August, 1929. The results of the investigation are being published in installments, the first of which relates to the trade-agreement district east of the Elbe (Berlin, Brandenburg, Mecklenburg, Pommern, Lower Silesia, Upper Silesia, Grenzmark, Posen-West Prussia, and East Prussia), covering 1,293 establishments with 58,925 building workers over 19 years of age; that is, about one-fifth of the building workers in this trade-agreement district.

About one-half of the establishments (657, or 50.8 per cent) and over nine-tenths of the workers (53,930, or 91.5 per cent) were engaged in steel and concrete construction, nearly one-third (17,786, or 30.2 per cent) were masons, and about one-third (17,192, or 29.2 per cent) were building helpers.[1]

The second installment relates to the northwestern trade-agreement district (Norden, Unterweser-Ems, Northwest Germany, Eastern Westphalia and Lippe, Western Germany, Rhineland, Siegerland, and Nahe), covering 2,035 establishments with 54,958 building workers over 19 years of age, including 910 establishments with 49,025 building workers engaged in steel and concrete construction, 991 establishments with 5,398 workers engaged in the painting trade, and 134 establishments with 535 workers engaged in roofing work.[2]

The third installment relates to the South Germany (Bavaria east of the Rhine, Wurttemberg and Hohenzollern, Baden, Palatinate, Hessen, and Hessen-Naussau) trade-agreement district covering 1,839 establishments with 45,733 building workers over 19 years of age, and of these 765 establishments with 39,552 building workers were engaged in steel and concrete construction, 989 establishments with 5,865 workers were engaged in the painting trade, and 85 establishments with 316 workers were engaged in roofing work.[3]

The average actual hourly and daily earnings, union rates, and hours worked by building workers in the various trade-agreement districts, by occupation, are shown in the following table:

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[1] Germany. Statistisches Amt. Wirtschaft und Statistik, Feb. 1, 1930, pp. 103–107.
[2] Idem, Apr. 2, 1930, pp. 343–348.
[3] Idem, Aug. 1, 1930, pp. 627–632.

AVERAGE ACTUAL HOURLY AND DAILY EARNINGS, UNION RATES, AND HOURS OF LABOR IN BUILDING TRADES IN GERMANY, BY DISTRICT AND OCCUPATION, AUGUST, 1929

[Conversions on basis of 1 mark (100 pfennigs) = 23.8 cents]

District and occupation	Actual earnings per hour		Union rate per hour		Per cent actual earnings form of union rate	Actual earnings per day		Hours of labor per day
	Pfennigs	U. S. currency (cents)	Pfennigs	U. S. currency (cents)		Marks	U. S. currency	
East of Elbe district								
Masons	232.5	55.3	154.0	36.7	151.0	18.17	$4.32	7.73
Carpenters	179.0	42.6	155.0	36.9	115.0	14.27	3.40	7.86
Concrete workers, skilled	176.8	42.1	154.0	36.7	115.0	15.16	3.61	8.21
Concrete workers	158.6	37.7	140.0	33.3	113.0	13.13	3.12	8.01
Mixers, concrete works	180.6	43.0	154.0	36.7	117.0	15.25	3.63	8.06
Building helpers	137.1	32.6	127.0	30.2	108.0	11.16	2.66	8.01
Underground workers	105.9	25.2	100.0	23.8	106.0	8.84	2.10	8.05
Painters' helpers	151.5	36.1	148.6	35.4	102.0	12.06	2.87	7.93
Roofers	167.6	39.9	162.0	38.6	103.0	13.44	3.20	8.01
Northwestern district								
Entire district:								
Masons	191.7	45.6	148.2	35.3	129.4	15.23	3.62	7.91
Carpenters	164.4	39.1	152.3	36.2	107.9	13.32	3.17	7.97
Concrete workers, skilled	156.6	37.3	149.9	35.7	104.5	13.38	3.18	8.38
Mixers, concrete works	181.1	43.1	151.5	36.1	119.5	14.66	3.49	8.04
Concrete workers	147.7	35.2	133.2	31.7	110.9	12.40	2.95	8.16
Building helpers	129.5	30.8	124.1	29.5	104.4	10.60	2.52	8.07
Underground workers	109.8	26.1	102.2	24.3	107.4	9.38	2.23	8.39
Painters' helpers	146.9	35.0	144.6	34.4	101.6	12.31	2.93	8.08
Roofers	153.8	36.6	152.5	36.3	100.9	12.37	2.94	8.01
Greater Hamburg:								
Masons	220.2	52.4	156.0	37.1	141.2	17.38	4.14	7.86
Carpenters	173.4	41.3	158.0	37.6	109.7	13.99	3.33	7.93
Concrete workers, skilled	162.2	38.6	156.0	37.1	104.0	13.68	3.26	8.33
Mixers, concrete works	200.5	47.7	158.0	37.6	126.9	15.96	3.80	7.90
Concrete workers	172.0	40.9	142.0	33.8	121.1	14.19	3.38	7.96
Building helpers	135.4	32.2	129.0	30.7	105.0	11.08	2.64	8.06
Underground workers	115.5	27.5	108.0	25.7	106.9	9.83	2.34	8.34
Painters' helpers	151.5	36.1	148.7	35.4	101.9	12.34	2.94	8.08
Roofers	167.6	39.9	167.0	39.7	100.4	13.51	3.22	8.01
South Germany, Hessen, and Hessen-Nassau district								
Bavaria east of the Rhine:								
Masons	140.6	33.5	130.6	31.1	107.7	11.40	2.71	8.07
Carpenters	128.4	30.6	127.6	30.4	100.6	10.58	2.52	8.20
Concrete workers, skilled	137.0	32.6	130.4	31.0	105.1	11.98	2.85	8.63
Mixers, concrete works	132.5	31.5	132.1	31.4	100.3	10.84	2.58	8.09
Concrete workers	121.4	28.9	117.4	27.9	103.4	10.79	2.57	8.78
Building helpers	108.8	25.9	107.9	25.7	100.8	9.04	2.15	8.24
Underground workers	88.5	21.1	88.0	20.9	100.6	8.04	1.91	8.99
Painters' helpers	136.6	32.5	133.6	31.8	102.2	11.18	2.66	8.16
Roofers	152.4	36.3	150.5	35.8	101.3	12.45	2.96	8.11
Wurttemberg and Hohenzollern:								
Masons	130.0	30.9	125.6	29.9	103.5	10.62	2.53	8.16
Carpenters	129.3	30.8	127.6	30.4	101.3	10.72	2.55	8.26
Concrete workers, skilled	133.1	31.7	129.4	30.8	102.9	11.19	2.66	8.33
Mixers, concrete works	124.9	29.7	124.1	29.5	100.6	10.55	2.51	8.44
Concrete workers	117.0	27.8	117.5	28.0	99.6	9.97	2.37	8.49
Building helpers	105.5	25.1	105.1	25.0	100.4	8.63	2.05	8.17
Underground workers	94.0	22.4	91.9	21.9	102.3	8.24	1.96	8.70
Painters' helpers	133.1	31.7	130.6	31.1	101.9	10.99	2.62	8.24
Roofers	140.9	33.5	140.5	33.4	100.3	11.55	2.75	8.20
Baden, etc.:								
Masons	134.1	31.9	131.9	31.4	101.7	11.11	2.64	8.24
Carpenters	132.5	31.5	131.2	31.2	101.0	11.58	2.76	8.60
Concrete workers, skilled	133.1	31.7	131.6	31.3	101.1	12.29	2.93	9.18
Mixers, concrete works	131.9	31.4	131.8	31.4	100.1	11.33	2.70	8.55
Concrete workers	125.7	29.9	121.0	28.8	103.9	11.72	2.79	9.26
Building helpers	109.9	26.2	109.4	26.0	100.5	9.23	2.20	8.37
Underground workers	102.4	24.4	100.7	24.0	101.7	9.73	2.32	9.27
Painters' helpers	128.2	30.5	125.9	30.0	101.8	10.55	2.51	8.22
Roofers	141.4	33.7	140.4	33.4	100.7	11.39	2.71	8.05

AVERAGE ACTUAL HOURLY AND DAILY EARNINGS, UNION RATES, AND HOURS OF LABOR IN BUILDING TRADES IN GERMANY, BY DISTRICT AND OCCUPATION, AUGUST, 1929—Continued

District and occupation	Actual earnings per hour		Union rate per hour		Per cent actual earnings form of union rate	Actual earnings per day		Hours of labor per day
	Pfennigs	U. S. currency (cents)	Pfennigs	U. S. currency (cents)		Marks	U. S. currency	
South Germany, Hessen, and Hessen-Nassua district—Continued								
Palatinate:								
Masons	125.1	29.8	123.9	29.5	101.0	10.45	$2.49	8.35
Carpenters	128.0	30.5	127.0	30.2	100.8	11.06	2.63	8.61
Concrete workers, skilled	124.8	29.7	122.9	29.3	101.5	11.39	2.71	9.06
Mixers, concrete works	124.6	29.7	124.4	29.6	100.2	10.71	2.55	8.59
Concrete workers	108.4	25.8	114.4	27.2	94.8	9.67	2.30	8.92
Building helpers	102.8	24.5	102.9	24.5	99.9	8.76	2.08	8.51
Underground workers	97.0	23.1	94.3	22.4	102.9	8.29	1.97	8.55
Hessen and Hessen-Nassau:								
Masons	133.5	31.8	131.5	31.3	101.5	10.77	2.56	8.04
Carpenters	135.7	32.3	134.2	31.9	101.1	11.11	2.64	8.14
Concrete workers, skilled	137.8	32.8	134.6	32.0	102.4	11.54	2.75	8.31
Mixers, concrete works	139.3	33.2	133.6	31.8	104.3	11.61	2.76	8.27
Concrete workers	129.3	30.8	124.4	29.6	103.9	10.86	2.58	8.37
Building helpers	111.0	26.4	109.9	26.2	101.0	9.05	2.15	8.12
Underground workers	107.1	25.5	103.4	24.6	103.6	9.26	2.20	8.46
Painters' helpers	134.4	32.0	133.4	31.7	100.7	10.57	2.52	7.85
Roofers	147.7	35.2	146.9	35.0	100.5	12.04	2.87	8.16

Employees and Wages in the Railway Service of Great Britain

THE Ministry of Transport has recently issued a report dealing with the number of workers in the railway service of Great Britain and the wages paid them, which is summarized in the Ministry of Labor Gazette for September, 1930. The number employed in a specified week for each of the last 10 years is given as follows:

March, 1921	735,870	March, 1926	689,264
March, 1922	676,802	April, 1927	683,077
March, 1923	681,778	March, 1928	677,148
March, 1924	700,573	March, 1929	642,137
March, 1925	702,062	March, 1930	656,530

These figures include all persons, whether of the salaried or wage-earning classes, employed directly by the railroads, but not those employed by contractors to do railroad work. For the week ending March 8, 1930, the 656,530 employees were divided as follows as to sex and age:

Adults:	
Male	595,264
Female	22,417
Total	617,681
Juniors:	
Male	37,460
Female	1,389
Total	38,849
Total employees:	
Male	632,724
Female	23,806
Total	656,530

In March, 1930, the division of the male employees among the principal departments was as follows:

	Adults	Juniors
Officers, clerical and supervising staff	94, 290	1, 294
Traffic department	110, 448	8, 298
Goods and cartage staff	56, 853	7, 665
Maintenance-of-way section (conciliation grades)	61, 409	126
Locomotive, carriage, and wagon department	106, 077	3, 572
Shop and artisan staff	118, 719	13, 500
Other departments (excluding ancillary businesses)	16, 474	790
Staff in ancillary businesses (docks, hotels, refreshment rooms, etc.)	30, 994	2, 215

The following table shows the average weekly wage and the average weekly earnings in a given week of March, in 1929 and 1930, for adult male workers of specified classes. The following explanation is given of the method of computing these figures:

The average wage, in the case of staff embraced by conciliation agreements, is computed from the basic rate, plus bonus additions, if any, under sliding scale, and in the case of other staff (e. g., mechanics and artisans) from the basic rate plus the war wage. The average earnings represent salaries or wages, residual bonus (if any), war wage, piecework payments, tonnage bonus, payments for overtime, Sunday duty and night duty, commuted allowances, and any other payments for work performed, but exclude compensation allowance, traveling and out-of-pocket expenses, meal and lodging allowances.

At both March, 1929 and March, 1930, agreements were in operation whereby 2.5 per cent was deducted from gross salaries and wages. This deduction is reflected in the average weekly earnings, but not in the average weekly salary or wage.

AVERAGE WEEKLY WAGES AND EARNINGS, 1929 AND 1930

[Conversions on basis of shilling = 24.33 cents; penny = 2.03 cents]

Class of worker	Week ending Mar. 9, 1929				Week ending Mar. 8, 1930			
	Average weekly wage		Average weekly earnings		Average weekly wage		Average weekly earnings	
	English currency	United States currency	English currency	United States currency	English currency	United States currency	English currency	United States currency
	s. d.		s. d.		s. d.		s. d.	
Carriage cleaners	46 2	$11.23	53 0	$12.90	46 1	$11.21	54 0	$13.14
Carters	50 8	12.33	56 2	13.67	50 8	12.33	56 2	13.67
Checkers	54 7	13.28	58 7	14.25	54 7	13.28	58 7	14.25
Engine cleaners	46 6	11.31	51 2	12.45	47 8	11.60	51 6	12.53
Engineers and motormen	87 9	21.35	104 10	25.50	88 0	21.41	101 0	24.58
Firemen and assistant motormen	67 5	16.40	80 4	19.55	68 4	16.63	77 9	18.92
Guards	64 10	15.78	76 4	18.57	64 11	15.80	73 0	17.76
Maintenance-of-way men:								
Foremen	53 1	12.92	58 0	14.11	53 3	12.96	59 3	14.42
Laborers	47 5	11.54	52 7	12.79	47 4	11.52	54 7	13.28
Porters (goods staff)	47 9	11.62	51 2	12.45	47 7	11.58	51 1	12.43
Porters, grade 2 (traffic)	43 6	10.58	46 11	11.42	43 2	10.50	46 7	11.33
Porters, parcel	50 0	12.17	53 11	13.12	50 1	12.19	53 11	13.12
Shunters, class 1	65 0	15.82	72 3	17.58	65 0	15.82	70 1	17.05
Shunters, class 3	55 0	13.38	62 6	15.21	55 0	13.38	59 1	14.38
Signalmen	59 1	14.38	68 2	16.59	59 3	14.41	66 11	16.28
Ticket collectors, class 1	58 1	14.13	64 6	15.69	58 1	14.13	64 6	15.69
Ticket collectors, class 2	54 0	13.14	58 6	14.23	54 0	13.14	58 6	14.23
Mechanics and artisans:								
Erectors, fitters, and turners	63 5	15.43	80 10	19.67	63 4	15.41	81 1	19.73
Carriage and truck builders and repairers	59 11	14.58	78 10	19.18	59 8	14.52	79 7	19.36
Machinists and machinemen	55 6	13.50	73 6	17.88	55 6	13.50	75 3	18.31
Smiths	64 5	15.67	80 6	19.59	64 5	15.67	81 3	19.77
Laborers (locomotive, car, and truck department)	46 0	11.19	56 7	13.77	46 1	11.21	57 0	13.87
Laborers (civil engineering)	46 7	11.33	51 3	12.47	46 3	11.25	52 5	12.75

Wages and Labor Conditions in the Straits Settlements in 1929

THE report of the Labor Department of the Straits Settlements for 1929 contains the following information on wages and labor conditions:

In Wellesley Province standard rates of wages for adult Indian laborers were established at 28 cents [1] per day for males and 22.4 cents for females on July 1, 1927, and have remained unchanged since that date. However, the report states that because of the fixing of these rates many employers have adopted systems of payment by results, so calculated that ordinary unskilled able-bodied laborers have been able to earn the standard rates while the stronger and more skilled workers earned considerably more. This plan is said to have resulted not only in an increase in the laborers' earnings on many estates, but in a reduction of production costs due to increased efficiency.

On the Island of Penang and in the Dindings, where standard wage rates have not been established, daily rates lower than 28 cents for men and 22.4 cents for women were paid in some cases.

Wage rates on estates in Singapore in 1929 ranged from 28 to 36.4 cents per day for adult male Indian laborers and from 25.2 to 28 cents for adult Indian females. In this Province many employers paid their tappers by results, which enabled skilled laborers to earn from $14 to $16.80 per month. Chinese and Javanese laborers received about the same wages as the Indians. Government departments paid from 30.8 to 39.2 cents and miscellaneous employers somewhat more, the rates of the latter ranging from 33.6 to 50.4 cents.

In Malacca, Indian tappers usually earned about 28 to 36.4 cents a day. For weeding and field work other than tapping, men generally received from 28 to 33.6 cents and women from 22.4 to 25.2 cents. Store coolies received about 33.6 to 39.2 cents a day. The mean daily rate of wages paid by the railway department was from 28 to 33.6 cents and by the public works department, 28 cents for men and 22.4 cents for women. Javanese and Malays were paid from 28 to 33.6 cents a day, while Chinese continued to be employed on contract.

There were no strikes or other labor disturbances in the Straits Settlements during 1929, according to the report, but 1,523 complaints from laborers, domestic servants, and others were registered and investigated by the labor department. Considerably more than half of the complaints concerned late payment or nonpayment of wages. In four cases civil proceedings were instituted for the recovery of wages, but all of the other complaints were settled by the labor department.

[1] Conversions made on the basis of the Straits Settlements' dollar in 1929=56 cents.

TREND OF EMPLOYMENT

Summary for September, 1930

EMPLOYMENT increased 1 per cent in September, 1930, as compared with August, and pay-roll totals increased 1.4 per cent, according to reports made to the Bureau of Labor Statistics.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both August and September, together with the per cent of change in September, are shown in the following summary:

SUMMARY OF EMPLOYMENT AND PAY-ROLL TOTALS, AUGUST AND SEPTEMBER, 1930

Industrial group	Establishments	Employment		Per cent of change	Pay roll in 1 week		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
1. Manufacturing	**13,536**	**3,042,125**	**3,039,139**	[1]−0.3	**$74,386,400**	**$74,962,527**	[1]+0.4
2. Coal mining	**1,422**	**288,123**	**305,175**	+5.9	**6,698,583**	**7,333,877**	+9.5
Anthracite	153	82,693	96,751	+17.0	2,532,797	2,944,884	+16.3
Bituminous	1,269	205,430	208,424	+1.5	4,165,786	4,388,993	+5.4
3. Metalliferous mining	**340**	**50,582**	**49,974**	−1.2	**1,371,672**	**1,351,627**	−1.5
4. Quarrying and nonmetallic mining	**751**	**37,919**	**37,229**	−1.8	**958,637**	**921,460**	−3.9
5. Crude petroleum producing	**547**	**31,895**	**30,916**	−3.1	**1,158,577**	**1,132,499**	−2.3
6. Public utilities	**11,575**	**766,917**	**755,253**	−1.5	**22,892,575**	**22,743,681**	−0.7
Telephone and telegraph	7,968	349,657	342,815	−2.0	9,851,683	9,822,825	−0.3
Power, light, and water	3,138	265,080	262,099	−1.1	8,282,992	8,241,631	−0.5
Electric railroad operation and maintenance, exclusive of car shops	469	152,180	150,339	−1.2	4,757,900	4,679,225	−1.7
7. Trade	**9,552**	**313,617**	**332,117**	+5.9	**8,156,644**	**8,494,189**	+4.1
Wholesale	2,029	65,006	64,894	−0.2	2,012,998	2,012,194	−[2]
Retail	7,523	248,611	267,223	+7.5	6,143,646	6,481,995	+5.5
8. Hotels	**2,117**	**164,909**	**162,612**	−1.4	**[3]2,762,175**	**[3]2,720,718**	−1.5
9. Canning and preserving	**935**	**92,990**	**123,458**	+32.8	**1,604,261**	**2,003,728**	+24.9
Total	**40,775**	**4,789,077**	**4,835,873**	+1.0	**119,989,524**	**121,664,306**	+1.4

Recapitulation by Geographic Divisions

Geographic division							
New England [4]	3,115	440,213	446,605	+1.5	$10,551,900	$10,709,057	+1.5
Middle Atlantic [5]	7,126	1,423,162	1,460,117	+2.6	38,784,825	39,743,630	+2.5
East North Central [6]	9,641	1,341,337	1,334,003	−0.5	34,363,934	34,768,180	+1.2
West North Central [7]	4,404	310,762	313,312	+0.8	7,652,405	7,748,741	+1.3
South Atlantic [8]	4,444	465,523	470,565	+1.1	9,261,256	9,416,779	+1.7
East South Central [9]	2,282	202,805	201,434	−0.7	3,736,275	3,706,245	−0.8
West South Central [10]	3,298	194,421	192,353	−1.1	4,713,573	4,676,397	−0.8
Mountain [11]	1,564	95,561	96,015	+0.5	2,475,891	2,508,726	+1.3
Pacific [12]	4,901	315,293	321,469	+2.0	8,449,465	8,386,551	−0.7
All divisions	**40,775**	**4,789,077**	**4,835,873**	**+1.0**	**119,989,524**	**121,664,306**	**+1.4**

[1] Weighted per cent of change for the combined 54 manufacturing industries, repeated from Table 2, p. 202; the remaining per cents of change, including total, are unweighted.
[2] Less than one-tenth of 1 per cent.
[3] Cash payments only; see text, p. 217.
[4] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
[5] New Jersey, New York, Pennsylvania.
[6] Illinois, Indiana, Michigan, Ohio, Wisconsin.
[7] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
[8] Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.
[9] Alabama, Kentucky, Mississippi, Tennessee.
[10] Arkansas, Louisiana, Oklahoma, Texas.
[11] Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.
[12] California, Oregon, Washington.

The combined total of these 13 industrial groups showed an increase of 1 per cent in employment from August to September and an increase of 1.4 per cent in employees' earnings. Excluding manufacturing the remaining 12 groups in September showed a gain in employment of 2.8 per cent and a gain of 2.4 per cent in pay-roll totals; manufacturing industries alone showed a decrease of 0.3 per cent in employment and an increase of 0.4 per cent in pay-roll totals.

Increased employment in September was shown in 4 of the 13 industrial groups: Canning and preserving reached what usually is the industry's peak with an increase of 32.8 per cent; anthracite mining and bituminous coal mining showed the effect of autumn demands with increases of 17 per cent and 1.5 per cent, respectively; and retail trade responded to the autumn season with an increase of 7.5 per cent.

Decreased employment was shown in the remaining 9 industrial groups as follows: Metalliferous mining, 1.2 per cent; quarrying, 1.8 per cent; crude petroleum, 3.1 per cent; telephone and telegraph, 2 per cent; power, light, water, 1.1 per cent; electric railroads, 1.2 per cent; wholesale trade, 0.2 per cent; hotels, 1.4 per cent; and manufacturing, 0.3 per cent.

The figures of the several industrial groups are not weighted according to the relative importance of each industry and therefore the per cents of change shown for the total figures represent only the changes in the establishments reporting. (Compare note 1, manufacturing industries, summary table, p. 197.)

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of July and August instead of for August and September, consequently the figures can not be combined with those presented in the foregoing table.

EMPLOYMENT AND PAY-ROLL TOTALS, CLASS I RAILROADS

Industry	Employment		Per cent of change	Amount of pay roll in entire month		Per cent of change
	July 15, 1930	Aug. 15, 1930		July, 1930	August, 1930	
Class I railroads	1,515,142	1,497,872	−1.1	$209,929,143	$207,828,332	−1.0

The total number of employees included in this summary is approximately 6,350,000, whose combined earnings in one week amounted to about $169,000,000.

1. Employment in Selected Manufacturing Industries in September, 1930

Comparison of Employment and Pay-roll Totals in Manufacturing Industries, August and September, 1930

EMPLOYMENT in manufacturing industries *decreased* 0.3 per cent in September as compared with August, while pay-roll totals *increased* 0.4 per cent. These changes are based upon returns made by 13,074 establishments in 54 of the chief manufacturing industries in the United States. These establishments in September had 2,929,079 employees whose combined earnings in one week were $72,258,248.

The bureau's weighted index of employment for September, 1930, is 79.7, as compared with 79.9 for August, 1930, 81.6 for July, 1930, and 99.3 for September, 1929; the index of pay-roll totals for September, 1930, is 74.2, as compared with 73.9 for August, 1930, 75.9 for July, 1930, and 102.6 for September, 1929. The monthly average for 1926 equals 100.

Substantially increased employment was shown in September in the food, textile, chemical, and tobacco groups; among the decreases in the remaining 8 groups of manufacturing industries were drops of 3.2 per cent in lumber, 2.7 per cent in vehicles, and 1.4 per cent in the iron and steel group.

Twenty-four of the 54 separate manufacturing industries reported increased employment in September, the notable gains having been such seasonal ones as 21 per cent in confectionery, 20.5 per cent in fertilizers, 12.3 per cent in women's clothing, 6.9 per cent in millinery, and 5.6 per cent in hosiery. Other outstanding gains were 2.2 per cent in cotton goods, 7.6 per cent in machine tools, 3.5 per cent in glass, 4.6 per cent in cigars, 9.9 per cent in pianos, 1.1 per cent in agricultural implements, and 0.3 per cent in electrical machinery.

Outstanding decreases in employment in September were 9 per cent in ice cream, 4.1 per cent in sawmills, 5.7 per cent in millwork, 3.9 per cent in automobiles, 5.2 per cent in tires, 3.1 per cent in carpets, 2.3 per cent in silk, 3.2 per cent in petroleum refining, 3.5 per cent in cement, 2 per cent in brick, and 2.3 per cent in the iron and steel industry.

Rayon alone of the six industries, for which data are not yet included in the bureau's indexes, showed decreased employment (1.1 per cent) in September. The increases in the remaining 5 industries were: 25.8 per cent in radio, 1.7 per cent in aircraft, 4.4 per cent in jewelry, 2.6 per cent in paint and varnish, and 1.1 per cent in miscellaneous rubber goods.

The New England, Middle Atlantic, and South Atlantic geographic divisions had more employees in September than in August, while the remaining six divisions reported fewer employees in September.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN AUGUST AND SEPTEMBER, 1930, BY INDUSTRIES

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
Food and kindred products	**1,951**	**223,551**	**229,540**	(1)	**$5,810,372**	**$6,015,568**	(1)
Slaughtering and meat packing	200	81,012	80,990	−(2)	2,116,824	2,164,099	+2.2
Confectionery	339	32,900	39,793	+21.0	615,451	768,143	+24.8
Ice cream	331	15,510	14,108	−9.0	514,794	475,028	−7.7
Flour	353	15,736	15,758	+0.1	425,115	425,198	+(2)
Baking	712	67,559	68,212	+1.0	1,817,148	1,859,930	+2.4
Sugar refining, cane	16	10,834	10,679	−1.4	321,040	323,170	+0.7
Textiles and their products	**2,404**	**529,030**	**541,226**	(1)	**9,463,803**	**9,935,773**	(1)
Cotton goods	457	162,508	166,066	+2.2	2,189,043	2,298,917	+5.0
Hosiery and knit goods	360	84,075	88,784	+5.6	1,391,946	1,550,404	+11.4
Silk goods	259	53,708	52,495	−2.3	1,023,647	995,864	−2.7
Woolen and worsted goods	188	54,289	54,052	−0.4	1,129,840	1,138,231	+0.7
Carpets and rugs	30	17,765	17,212	−3.1	349,307	352,288	+0.9
Dyeing and finishing textiles	120	33,364	32,962	−1.2	749,766	784,579	+4.6
Clothing, men's	335	62,843	64,009	+1.9	1,355,533	1,303,387	−3.8
Shirts and collars	115	17,725	18,374	+3.7	254,919	258,681	+1.5
Clothing, women's	413	28,808	32,360	+12.3	722,713	897,751	+24.2
Millinery and lace goods	127	13,945	14,912	+6.9	297,089	355,671	+19.7
Iron and steel and their products	**1,959**	**607,051**	**599,481**	(1)	**16,132,307**	**15,719,466**	(1)
Iron and steel	203	243,792	238,220	−2.3	6,667,199	6,432,192	−3.5
Cast-iron pipe	39	10,734	10,513	−2.1	241,373	239,519	−0.8
Structural ironwork	176	28,681	28,377	−1.1	841,054	798,824	−5.0
Foundry and machine-shop products	1,067	224,921	220,997	−1.7	5,986,475	5,777,349	−3.5
Hardware	75	25,738	26,107	+1.4	538,319	541,366	+0.6
Machine tools	155	26,265	28,249	+7.6	685,133	735,410	+7.3
Steam fittings and steam and hot-water heating apparatus	109	27,828	28,004	+0.6	712,963	710,970	−0.3
Stoves	135	19,092	19,014	−0.4	459,791	483,836	+5.2
Lumber and its products	**1,368**	**181,777**	**176,179**	(1)	**3,685,472**	**3,635,325**	(1)
Lumber, sawmills	618	104,937	100,629	−4.1	2,033,001	1,964,332	−1.9
Lumber, millwork	338	26,641	25,114	−5.7	612,506	571,405	−6.7
Furniture	412	50,199	50,436	+0.5	1,069,965	1,099,588	+2.8
Leather and its products	**448**	**133,281**	**131,145**	(1)	**2,784,884**	**2,652,642**	(1)
Leather	136	25,912	25,764	−0.6	639,290	623,497	−2.5
Boots and shoes	312	107,369	105,381	−1.9	2,145,594	2,029,145	−5.4
Paper and printing	**1,262**	**205,308**	**203,493**	(1)	**6,715,996**	**6,696,769**	(1)
Paper and pulp	210	57,113	55,875	−2.2	1,452,287	1,406,837	−3.1
Paper boxes	190	18,532	18,865	+1.8	410,801	423,916	+3.2
Printing, book and job	447	53,263	51,609	−3.1	1,798,086	1,760,223	−2.1
Printing, newspapers	415	76,400	77,144	+1.0	3,054,822	3,105,793	+1.7
Chemicals and allied products	**411**	**102,128**	**102,783**	(1)	**3,014,040**	**3,012,777**	(1)
Chemicals	155	38,164	38,788	+1.6	1,027,114	1,042,984	+1.5
Fertilizers	176	8,661	10,436	+20.5	166,127	202,632	+22.0
Petroleum refining	80	55,303	53,559	−3.2	1,820,799	1,767,161	−2.9
Stone, clay, and glass products	**1,023**	**115,016**	**114,865**	(1)	**2,746,788**	**2,750,380**	(1)
Cement	119	24,971	24,095	−3.5	707,708	683,097	−3.5
Brick, tile, and terra cotta	640	34,554	33,863	−2.0	769,359	760,467	−1.2
Pottery	118	17,176	17,269	+0.5	360,507	365,254	+1.3
Glass	146	38,315	39,638	+3.5	909,214	941,562	+3.6
Metal products, other than iron and steel	**244**	**46,585**	**45,438**	(1)	**1,066,864**	**1,039,168**	(1)
Stamped and enameled ware	80	17,190	16,927	−1.5	369,229	355,027	−3.8
Brass, bronze, and copper products	164	29,395	28,511	−3.0	697,635	684,141	−1.9
Tobacco products	**232**	**59,818**	**62,295**	(1)	**946,315**	**978,598**	(1)
Chewing and smoking tobacco and snuff	27	8,742	8,862	+1.4	144,528	144,562	+(2)
Cigars and cigarettes	205	51,076	53,433	+4.6	801,787	834,036	+4.0

[1] The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting, for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

[2] Less than one-tenth of 1 per cent.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN AUGUST AND SEPTEMBER, 1930, BY INDUSTRIES—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
Vehicles for land transportation	**1,268**	**439,776**	**426,288**	(1)	**$11,221,020**	**$11,544,897**	(1)
Automobiles	209	297,320	285,779	−3.9	7,031,002	7,567,082	+7.6
Carriages and wagons	54	1,197	1,174	−1.9	27,084	24,831	−8.3
Car building and repairing, electric-railroad	439	28,229	28,080	−0.5	862,018	839,053	−2.7
Car building and repairing, steam-railroad	566	113,030	111,255	−1.6	3,300,916	3,113,931	−5.7
Miscellaneous industries	**966**	**398,804**	**406,406**	(1)	**10,798,539**	**10,981,164**	(1)
Agricultural implements	86	18,398	18,606	+1.1	430,675	424,178	−1.5
Electrical machinery, apparatus and supplies	212	174,091	174,588	+0.3	4,947,412	5,057,065	+2.2
Pianos and organs	68	5,702	6,269	+9.9	151,950	168,528	+10.9
Rubber boots and shoes	9	14,804	14,427	−2.5	303,551	296,503	−2.3
Automobile tires	41	44,661	42,332	−5.2	1,281,405	1,169,884	−8.7
Shipbuilding	88	40,269	40,124	−0.4	1,193,824	1,160,727	−2.8
Rayon [3]	17	22,542	22,292	−1.1	432,937	427,688	−1.2
Radio [3]	44	32,088	40,375	+25.8	866,009	1,035,992	+19.6
Aircraft [3]	42	8,180	8,317	+1.7	268,882	269,278	+0.1
Jewelry [3]	118	12,792	13,353	+4.4	285,749	325,027	+13.7
Paint and varnish [3]	172	11,383	11,676	+2.6	308,857	310,347	+0.5
Rubber goods, other than rubber boots, shoes, tires and tubes [3]	69	13,894	14,047	+1.1	327,288	335,947	+2.6
All industries	**13,536**	**3,042,125**	**3,039,139**	(1)	**74,386,400**	**74,962,527**	(1)

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION [4]							
New England	1,519	335,351	339,249	+1.2	$7,572,739	$7,677,928	+1.4
Middle Atlantic	3,539	909,345	925,177	+1.7	24,453,326	24,851,704	+1.6
East North Central	3,259	971,788	952,444	−2.0	24,528,546	24,698,609	+0.7
West North Central	1,183	167,016	166,397	−0.4	4,060,644	4,053,678	−0.2
South Atlantic	1,586	311,299	313,367	+0.7	5,759,964	5,831,735	+1.2
East South Central	635	111,367	109,275	−1.9	2,006,329	1,968,413	−1.9
West South Central	749	93,710	92,582	−1.2	2,176,846	2,155,046	−1.0
Mountain	244	28,263	27,093	−4.1	764,122	730,878	−4.4
Pacific	822	113,986	113,555	−0.4	3,063,884	2,994,536	−2.3
All divisions	**13,536**	**3,042,125**	**3,039,139**	(1)	**74,386,400**	**74,962,527**	(1)

[1] The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting, for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

[3] The rayon industry was surveyed for the first time for the January–February, 1929, comparison, the radio industry for the March–April, 1929, comparison, the aircraft, jewelry, and paint and varnish industries for the February–March, 1930, comparison, and the rubber goods industry for the March–April, 1930, comparison, and, since the data for computing relative numbers are not yet available, these industries are not included in the bureau's indexes of employment and pay-roll totals. The total figures for all manufacturing industries given in the text, p. 199, do not include rayon, radio, aircraft, jewelry, paint and varnish, or rubber goods.

[4] See footnotes 4 to 12, p. 197.

TABLE 2.—PER CENT OF CHANGE, AUGUST TO SEPTEMBER, 1930—12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group by the number of employees, or wages paid, in the industries]

Group	Per cent of change, August to September, 1930		Group	Per cent of change, August to September, 1930	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	+2.5	+3.2	Stone, clay, and glass products	−0.3	(1)
Textiles and their products	+2.7	+6.1	Metal products, other than iron and steel	−2.5	−2.4
Iron and steel and their products	−1.4	−2.8	Tobacco products	+4.3	+3.5
Lumber and its products	−3.2	−1.3	Vehicles for land transportation	−2.7	+0.2
Leather and its products	−1.6	−4.8	Miscellaneous industries	−0.6	−0.6
Paper and printing	−1.0	−0.5			
Chemicals and allied products	+1.4	+0.7	**All industries**	**−0.3**	**+0.4**

[1] No change.

Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, September, 1930, with September, 1929

THE LEVEL of employment in manufacturing industries in September, 1930, was 19.7 per cent lower than in September, 1929, and pay-roll totals were 27.7 per cent lower.

Two industries only—cane-sugar refining and shipbuilding—of the 54 separate industries had more employees at the end of the 12-month period than at the beginning, although one other industry—chewing and smoking tobacco—joined them in reporting a larger pay-roll total at the end of the period.

The notable decreases in employment in September, 1930, as compared with September, 1929, were in the millwork, carpet, machine tool, automobile, agricultural implement, and carriage and wagon industries. These decreases ranged from 30.8 per cent in the first-mentioned industry to 36.7 per cent in the last mentioned. A second group of industries reported decreased employment ranging from 20.7 per cent to 29.6 per cent, the industries concerned being cotton goods, steam-railroad car shops, silk goods, glass, foundry and machine-shop products brass-bronze-copper products, electrical machinery, stoves, brick-tile-terra cotta, pianos, automobile tires, furniture, sawmills, and rubber boots and shoes; employment in the iron and steel industry fell off 18 per cent during the year interval.

Each of nine geographic divisions showed a marked falling off in employment, and an even greater decrease in pay-roll totals in September, 1930, as compared with September, 1929, the range in both items being from 12.9 per cent and 18.3 per cent in the South Atlantic division to 26.6 per cent and 37 per cent in the East North Central division.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN **MANUFACTURING** INDUSTRIES, SEPTEMBER, 1930, WITH SEPTEMBER, 1929

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change September, 1930, compared with September, 1929		Industry	Per cent of change September, 1930, compared with September, 1929	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	**−7.1**	**−6.8**	**Chemicals and allied products**	**−10.4**	**−12.4**
Slaughtering and meat packing	−6.3	−5.1	Chemicals	−9.4	−13.7
Confectionery	−8.6	−7.9	Fertilizers	−7.2	−6.5
Ice cream	−10.2	−10.4	Petroleum refining	−12.5	−12.0
Flour	−8.3	−12.2			
Baking	−7.0	−6.9	**Stone, clay, and glass products**	**−20.3**	**−27.5**
Sugar refining, cane	+2.0	+3.7	Cement	−7.8	−14.0
			Brick, tile and terra cotta	−25.8	−30.8
Textiles and their products	**−17.7**	**−24.7**	Pottery	−13.3	−27.8
Cotton goods	−20.7	−29.2	Glass	−22.6	−30.3
Hosiery and knit goods	−16.4	−25.7			
Silk goods	−22.3	−30.2	**Metal products, other than iron and steel**	**−22.7**	**−34.5**
Woolen and worsted goods	−19.8	−25.2	Stamped and enameled ware	−17.6	−27.7
Carpets and rugs	−31.3	−44.4	Brass, bronze, and copper products	−24.9	−36.8
Dyeing and finishing textiles	−15.2	−20.1			
Clothing, men's	−14.7	−24.8	**Tobacco products**	**−6.4**	**−14.1**
Shirts and collars	−18.0	−28.4	Chewing and smoking tobacco and snuff	−0.8	+0.5
Clothing, women's	−7.2	−13.9	Cigars and cigarettes	−7.0	−15.6
Millinery and lace goods	−8.8	−8.8			
			Vehicles for land transportation	**−28.0**	**−38.7**
Iron and steel and their products	**−21.2**	**−33.1**	Automobiles	−35.2	−48.1
Iron and steel	−18.0	−31.2	Carriages and wagons	−36.7	−39.6
Cast-iron pipe	−18.0	−21.4	Car building and repairing, electric-railroad	−6.6	−10.8
Structural ironwork	−15.5	−23.6	Car building and repairing, steam-railroad	−21.0	−28.8
Foundry and machine-shop products	−23.1	−34.8			
Hardware	−19.6	−35.5	**Miscellaneous industries**	**−23.3**	**−27.2**
Machine tools	−34.2	−47.9	Agricultural implements	−36.1	−48.2
Steam fittings and steam and hot-water heating apparatus	−19.2	−31.2	Electrical machinery, apparatus, and supplies	−25.0	−28.7
Stoves	−25.1	−32.4	Pianos and organs	−28.1	−37.3
			Rubber boots and shoes	−29.6	−42.1
Lumber and its products	**−29.8**	**−37.0**	Automobile tires	−28.3	−28.8
Lumber, sawmills	−29.6	−36.3	Shipbuilding	+7.1	+0.9
Lumber, millwork	−30.8	−35.7			
Furniture	−29.6	−38.9	**All industries**	**−19.7**	**−27.7**
Leather and its products	**−13.5**	**−26.9**			
Leather	−11.8	−16.5			
Boots and shoes	−13.9	−29.7			
Paper and printing	**−6.8**	**−8.5**			
Paper and pulp	−8.5	−15.1			
Paper boxes	−8.5	−13.3			
Printing, book and job	−9.8	−9.1			
Printing, newspapers	−1.3	−2.7			

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION [1]			GEOGRAPHIC DIVISION—Con.		
New England	−18.9	−27.4	West South Central	−22.8	−25.6
Middle Atlantic	−15.3	−22.0	Mountain	−20.5	−23.3
East North Central	−26.6	−37.0	Pacific	−19.6	−23.4
West North Central	−15.5	−20.9			
South Atlantic	−12.9	−18.3	**All divisions**	**−19.7**	**−27.7**
East South Central	−21.9	−28.2			

[1] See footnotes, 4 to 12, p. 197.

Per Capita Earnings in Manufacturing Industries

PER CAPITA earnings in 54 chief manufacturing industries combined in September, 1930, were 0.6 per cent greater than in August, 1930, and 9.9 per cent smaller than in September, 1929.

The per capita weekly earnings in September, 1930, for the 54 industries upon which the bureau indexes are based, and also for the six additional industries not yet included in the indexes, together with per cents of change in September, 1930, as compared with August, 1930, and with September, 1929, are shown in Table 4.

TABLE 4.—PER CAPITA EARNINGS IN **MANUFACTURING** INDUSTRIES IN SEPTEMBER, 1930, AND COMPARISON WITH AUGUST, 1930, AND SEPTEMBER, 1929

Industry	Actual per capita weekly earnings in September, 1930	Per cent of change September, 1930, compared with—	
		August, 1930	September, 1929
Food and kindred products:			
Slaughtering and meat packing	$26.72	+2.3	+1.5
Confectionery	19.30	+3.2	+0.6
Ice cream	33.67	+1.4	−0.2
Flour	26.98	−0.1	−4.3
Baking	27.27	+1.4	+0.4
Sugar refining, cane	30.26	+2.1	+1.4
Textiles and their products:			
Cotton goods	13.84	+2.7	−10.4
Hosiery and knit goods	17.46	+5.4	−11.1
Silk goods	18.97	−0.5	−10.4
Woolen and worsted goods	21.06	+1.2	−6.2
Carpets and rugs	20.47	+4.1	−19.1
Dyeing and finishing textiles	23.80	+5.9	−5.9
Clothing, men's	20.36	−5.6	−11.7
Shirts and collars	14.08	−2.1	−12.5
Clothing, women's	27.74	+10.6	−7.1
Millinery and lace goods	23.85	+12.0	(1)
Iron and steel and their products:			
Iron and steel	27.00	−1.3	−16.1
Cast-iron pipe	22.78	+1.3	−3.9
Structural ironwork	28.15	−4.0	−9.7
Foundry and machine-shop products	26.14	−1.8	−15.2
Hardware	20.74	−0.9	−19.9
Machine tools	26.03	−0.2	−21.0
Steam fittings and steam and hot-water heating apparatus	25.39	−0.9	−14.9
Stoves	25.45	+5.7	−9.2
Lumber and its products:			
Lumber, sawmills	19.52	+2.3	−9.4
Lumber, millwork	22.75	−1.0	−7.1
Furniture	21.80	+2.3	−13.2
Leather and its products:			
Leather	24.20	−1.9	−5.5
Boots and shoes	19.26	−3.6	−18.5
Paper and printing:			
Paper and pulp	25.18	−1.0	−7.6
Paper boxes	22.47	+1.4	−4.9
Printing, book and job	34.11	+1.0	+0.5
Printing, newspapers	40.26	+0.7	−1.3
Chemicals and allied products:			
Chemicals	26.89	−0.1	−4.7
Fertilizers	19.42	+1.3	+0.7
Petroleum refining	32.99	+0.2	+0.4
Stone, clay, and glass products:			
Cement	28.35	+(2)	−6.8
Brick, tile, and terra cotta	22.46	+0.9	−6.7
Pottery	21.15	+0.8	−16.4
Glass	23.75	+0.1	−10.0
Metal products, other than iron and steel:			
Stamped and enameled ware	20.97	−2.4	−12.0
Brass, bronze, and copper products	24.00	+1.1	−16.3
Tobacco products:			
Chewing and smoking tobacco and snuff	16.31	−1.3	+1.9
Cigars and cigarettes	15.61	−0.6	−9.4

[1] No change.

[2] Less than one-tenth of 1 per cent.

TABLE 4.—PER CAPITA EARNINGS IN MANUFACTURING INDUSTRIES IN SEPTEMBER, 1930, AND COMPARISON WITH AUGUST, 1930, AND SEPTEMBER, 1929—Contd.

Industry	Actual per capita weekly earnings in September, 1930	Per cent of change September, 1930, compared with—	
		August, 1930	September, 1929
Vehicles for land transportation:			
Automobiles	$26.48	+12.0	−19.8
Carriages and wagons	21.15	−6.5	−4.5
Car building and repairing, electric-railroad	29.88	−2.2	−4.4
Car building and repairing, steam-railroad	27.99	−4.1	−9.4
Miscellaneous industries:			
Agricultural implements	22.80	−2.6	−19.3
Electrical machinery, apparatus, and supplies	28.97	+1.9	−4.6
Pianos and organs	26.88	+0.9	−12.9
Rubber boots and shoes	20.55	+0.2	−17.7
Automobile tires	27.64	−3.7	−1.1
Shipbuilding	28.93	−2.4	−5.7
Rayon	19.19	−0.1	[1]
Radio	25.66	−4.9	[1]
Aircraft	32.38	−1.5	[1]
Jewelry	24.34	+9.0	[1]
Paint and varnish	26.58	−2.0	[1]
Rubber goods, other than rubber boots, shoes, tires, and tubes	23.92	+1.5	[1]

[1] Figures not available.

Index Numbers of Employment and Pay-Roll Totals in Manufacturing Industries

TABLE 5 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to September, 1930, together with average indexes for each of the years 1923 to 1929, inclusive.

TABLE 5.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO SEPTEMBER, 1930

[Monthly average, 1926=100]

Month	Employment								Pay-roll total							
	1923	1924	1925	1926	1927	1928	1929	1930	1923	1924	1925	1926	1927	1928	1929	1930
January	106.6	103.8	97.9	100.4	97.3	91.6	95.2	90.2	95.8	98.6	93.9	98.0	94.9	89.6	94.5	87.6
February	108.4	105.1	99.7	101.5	99.0	93.0	97.4	90.3	99.4	103.8	99.3	102.2	100.6	93.9	101.8	90.7
March	110.8	104.9	100.4	102.0	99.5	93.7	98.6	89.8	104.7	103.3	100.8	103.4	102.0	95.2	103.9	90.8
April	100.8	102.8	100.2	101.0	98.6	93.3	99.1	89.1	105.7	101.1	98.3	101.5	100.8	93.8	104.6	89.8
May	110.8	98.8	98.9	99.8	97.6	93.0	99.2	87.7	109.4	96.5	98.5	99.8	99.8	94.1	104.8	87.6
June	110.9	95.6	98.0	99.3	87.0	93.1	98.8	85.5	109.3	90.8	95.7	99.7	97.4	94.2	102.8	84.1
July	109.2	92.3	97.2	97.7	95.0	92.2	98.2	81.6	104.3	84.3	93.5	95.2	93.0	91.2	98.2	75.9
August	108.5	92.5	97.8	98.7	95.1	93.6	98.6	79.9	103.7	87.2	95.4	98.7	95.0	94.2	102.1	73.9
September	108.6	94.3	98.9	100.3	95.8	95.0	99.3	79.7	104.4	89.8	94.4	99.3	94.1	95.4	102.6	74.2
October	108.1	95.6	100.4	100.7	95.3	95.9	98.3	------	106.8	92.4	100.4	102.9	95.2	99.0	102.3	------
November	107.4	95.5	100.7	99.5	93.5	95.4	94.8	------	105.4	91.4	100.4	99.6	91.6	96.1	95.1	------
December	105.4	97.3	100.8	98.9	92.6	95.5	91.9	------	103.2	95.7	101.6	99.8	93.2	97.7	92.0	------
Average	**108.8**	**98.2**	**99.2**	**100.0**	**96.4**	**93.8**	**97.5**	[1] **86.0**	**104.3**	**94.6**	**97.7**	**100.0**	**96.5**	**94.5**	**100.4**	[1] **83.8**

[1] Average for nine months.

Index numbers showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics and in each of the 12 groups of industries, and also general indexes for the combined 12 groups of industries, are shown in Table 6 for September, 1929, and for July, August, and September, 1930.

In computing the general indexes and the group indexes the index numbers of separate industries are weighted according to the importance of the industries.

Following Table 6 are two charts which represent the 54 separate industries combined and show the course of pay-roll totals as well as the course of employment for each month of the years 1926 to 1929, inclusive, and for January, February, March, April, May, June, July, August, and September, 1930.

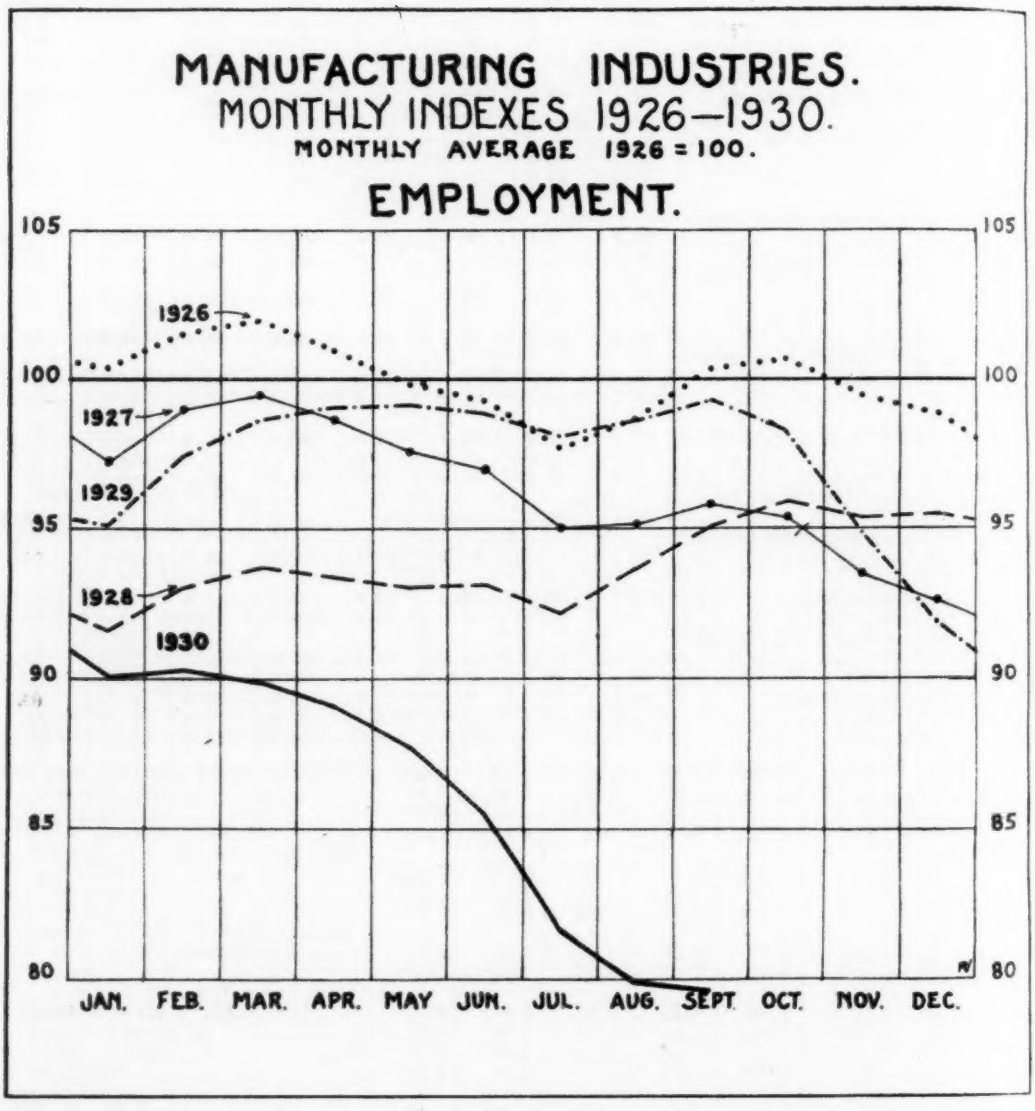
TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, SEPTEMBER, 1929, AND JULY, AUGUST, AND SEPTEMBER, 1930

[Monthly average, 1926=100]

Industry	Employment				Pay-roll totals			
	1929	1930			1929	1930		
	September	July	August	September	September	July	August	September
General index	**99.3**	**81.6**	**79.9**	**79.7**	**102.6**	**75.9**	**73.9**	**74.2**
Food and kindred products	**102.1**	**94.7**	**92.6**	**94.9**	**105.3**	**97.6**	**95.1**	**98.1**
Slaughtering and meat packing	100.6	96.8	94.3	94.3	104.2	100.7	96.8	98.9
Confectionery	99.8	76.6	75.4	91.2	102.0	73.7	75.2	93.9
Ice cream	102.5	102.8	101.1	92.0	103.3	102.4	100.4	92.6
Flour	106.4	97.7	97.5	97.6	115.0	99.5	101.0	101.0
Baking	104.4	98.1	96.1	97.1	106.5	99.8	96.9	99.2
Sugar refining, cane	89.5	99.8	92.6	91.3	92.1	103.6	94.8	95.5
Textiles and their products	**97.1**	**77.6**	**77.8**	**79.9**	**97.8**	**67.3**	**69.4**	**73.6**
Cotton goods	94.0	75.9	72.9	74.5	91.2	64.8	61.5	64.6
Hosiery and knit goods	100.6	80.9	79.6	84.1	106.3	70.8	70.9	79.0
Silk goods	98.1	78.6	78.0	76.2	100.6	67.7	72.1	70.2
Woolen and worsted goods	97.4	77.4	78.4	78.1	98.1	72.7	72.9	73.4
Carpets and rugs	103.8	68.7	73.5	71.3	99.2	50.6	54.7	55.2
Dyeing and finishing textiles	100.8	84.2	86.6	85.5	100.0	72.8	76.4	79.9
Clothing, men's	95.3	79.7	79.7	81.3	92.0	70.2	71.9	69.2
Shirts and collars	93.9	76.1	74.3	77.0	91.5	65.2	64.5	65.5
Clothing, women's	102.8	77.9	85.0	95.4	108.7	65.6	75.4	93.6
Millinery and lace goods	94.0	70.1	80.2	85.7	93.2	55.3	71.0	85.0
Iron and steel and their products	**100.7**	**84.0**	**80.5**	**79.4**	**104.2**	**74.5**	**71.7**	**69.7**
Iron and steel	96.3	83.9	80.8	79.0	101.7	74.4	72.5	70.0
Cast-iron pipe	81.8	70.3	68.5	67.1	83.3	67.6	66.0	65.5
Structural ironwork	107.7	95.6	92.0	91.0	112.1	88.5	90.2	85.7
Foundry and machine-shop products	105.7	87.2	82.7	81.3	108.1	77.5	73.0	70.5
Hardware	92.2	76.1	73.1	74.1	93.4	61.3	59.8	60.2
Machine tools	134.9	95.6	82.6	88.8	143.9	84.0	69.8	74.9
Steam fittings and steam and hot-water heating apparatus	77.2	60.4	62.0	62.4	78.2	53.0	54.0	53.8
Stoves	97.1	69.7	73.0	72.7	93.4	55.9	60.0	63.1
Lumber and its products	**91.4**	**68.1**	**66.3**	**64.2**	**94.9**	**62.1**	**60.6**	**59.8**
Lumber, sawmills	89.0	68.1	65.4	62.7	92.6	64.7	60.1	59.0
Lumber, millwork	84.1	63.6	61.7	58.2	85.8	59.5	59.2	55.2
Furniture	102.1	70.7	71.6	71.9	105.6	58.7	62.7	64.5
Leather and its products	**98.4**	**85.7**	**86.5**	**85.1**	**100.7**	**76.0**	**77.3**	**73.6**
Leather	95.3	84.4	84.6	84.1	97.6	82.2	83.5	81.5
Boots and shoes	99.2	86.0	87.0	85.4	101.6	74.2	75.5	71.4
Paper and printing	**102.9**	**97.6**	**96.9**	**95.9**	**107.7**	**99.4**	**99.0**	**98.5**
Paper and pulp	96.2	89.9	90.0	88.0	98.5	84.0	86.3	83.6
Paper boxes	99.0	87.4	89.0	90.6	108.0	90.4	90.7	93.6
Printing, book and job	105.6	100.3	98.3	95.3	108.3	102.6	100.5	98.4
Printing, newspapers	108.9	107.8	106.5	107.5	113.9	109.8	109.0	110.8

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN **MANUFACTURING** INDUSTRIES, SEPTEMBER, 1929, AND JULY, AUGUST, AND SEPTEMBER, 1930—Con.

Industry	Employment				Pay-roll totals			
	1929	1930			1929	1930		
	September	July	August	September	September	July	August	September
Chemicals and allied products	**101.6**	**89.3**	**89.7**	**91.0**	**105.2**	**91.8**	**91.6**	**92.2**
Chemicals	103.6	91.6	92.4	93.9	106.0	89.6	90.1	91.5
Fertilizers	90.9	65.6	70.1	84.4	92.3	71.0	70.7	86.3
Petroleum refining	102.7	94.1	92.9	89.9	106.6	97.4	96.6	93.8
Stone, clay, and glass products	**90.5**	**72.8**	**72.3**	**72.1**	**89.6**	**64.5**	**65.0**	**65.0**
Cement	84.2	80.3	80.5	77.6	87.3	77.2	77.8	75.1
Brick, tile, and terra cotta	87.3	67.4	66.1	64.8	82.4	57.5	57.7	57.0
Pottery	92.7	76.3	80.0	80.4	91.1	62.1	65.0	65.8
Glass	97.4	74.8	72.9	75.4	100.6	68.3	67.7	70.1
Metal products, other than iron and steel	**96.2**	**78.4**	**76.3**	**74.4**	**100.6**	**68.9**	**67.5**	**65.9**
Stamped and enameled ware	89.7	77.3	75.1	73.9	89.3	64.9	67.1	64.6
Brass, bronze, and copper products	99.3	78.9	76.9	74.6	105.1	70.5	67.7	66.4
Tobacco products	**95.9**	**90.2**	**86.1**	**89.8**	**98.6**	**86.7**	**81.8**	**84.7**
Chewing and smoking tobacco and snuff	89.3	86.6	87.4	88.6	86.8	84.8	87.2	87.2
Cigars and cigarettes	96.7	90.7	85.9	89.9	100.0	86.9	81.1	84.4
Vehicles for land transportation	**99.9**	**77.0**	**73.9**	**71.9**	**104.8**	**70.3**	**64.1**	**64.2**
Automobiles	115.7	82.9	78.0	75.0	117.0	70.4	56.5	60.7
Carriages and wagons	85.0	56.8	54.8	53.8	92.2	63.7	60.7	55.7
Car building and repairing, electric-railroad	91.5	86.5	86.0	85.5	93.3	86.3	85.5	83.2
Car building and repairing, steam-railroad	86.5	71.1	69.4	68.3	93.2	69.1	70.4	66.4
Miscellaneous industries	**114.7**	**90.9**	**88.5**	**88.0**	**115.1**	**87.9**	**84.3**	**83.8**
Agricultural implements	109.2	79.4	69.1	69.8	108.1	63.8	56.8	56.0
Electrical machinery, apparatus, and supplies	127.3	97.9	95.2	95.5	130.8	96.5	91.3	93.3
Pianos and organs	65.4	42.7	42.8	47.0	63.6	35.2	36.0	39.9
Rubber boots and shoes	103.3	72.4	74.6	72.7	109.0	65.3	64.6	63.1
Automobile tires	102.3	80.1	77.4	73.4	92.9	75.8	72.4	66.1
Shipbuilding	105.8	112.7	113.7	113.3	110.6	113.3	114.8	111.6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MONTHLY INDEXES 1926—1930.
MONTHLY AVERAGE 1926 = 100.
EMPLOYMENT.
105
100
95
90
85
80
1926
1927
1929
1928
1930
JAN.
FEB.
MAR.
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MAY
JUN.
JUL.
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SEPT.
OCT.
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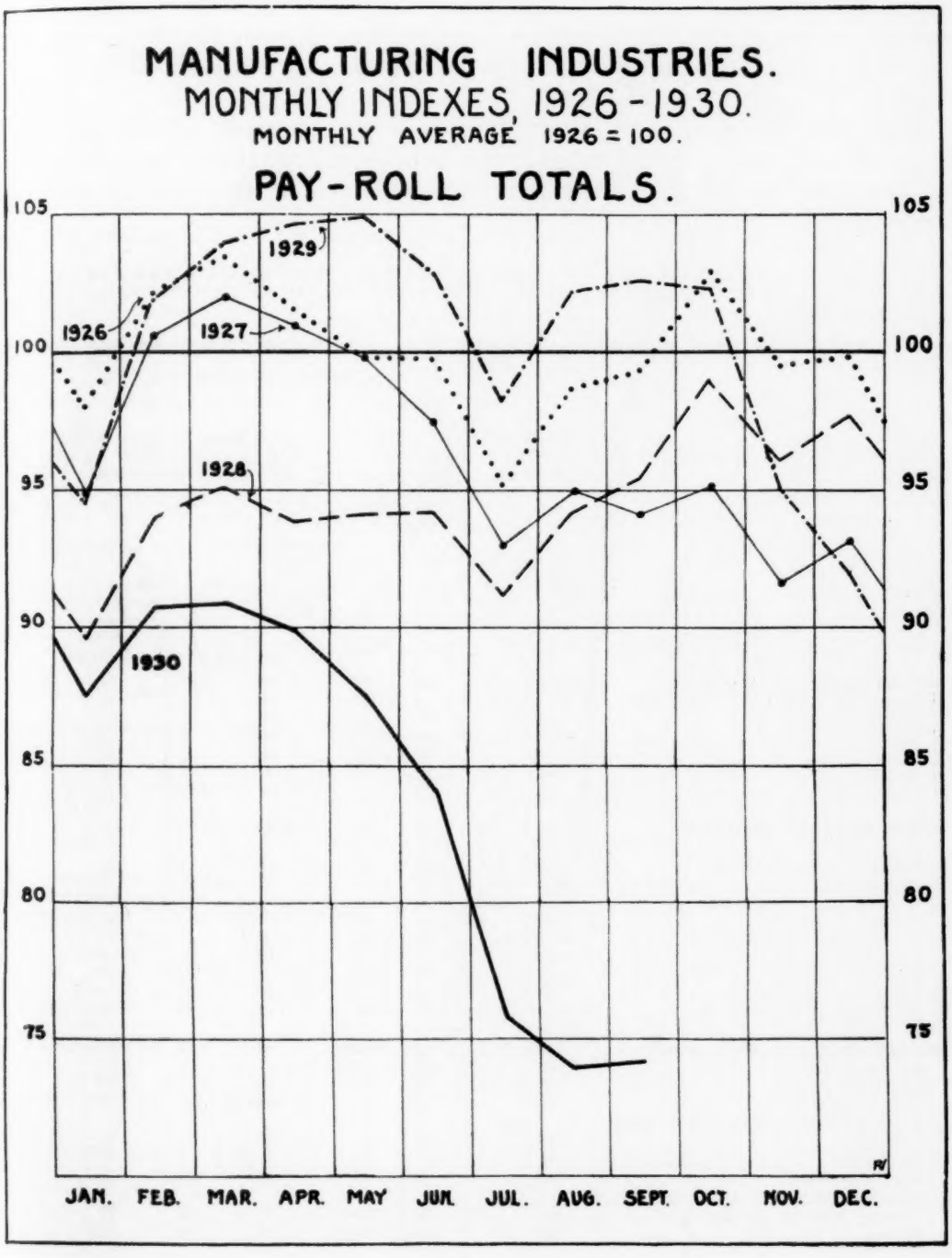

MANUFACTURING INDUSTRIES.
MONTHLY INDEXES, 1926-1930.
MONTHLY AVERAGE 1926 = 100.
PAY-ROLL TOTALS.
105
100
95
90
85
80
75
1926
1927
1928
1929
1930
JAN.
FEB.
MAR.
APR.
MAY
JUN.
JUL.
AUG.
SEPT.
OCT.
NOV.
DEC.

Force Employed and Time Worked in Manufacturing Industries in September, 1930

REPORTS as to force employed and working time of employees in September were received from 10,690 establishments in 54 manufacturing industries. Twenty-four per cent of the establishments had a full normal force of employees, 75 per cent were working with reduced forces, and 1 per cent were idle; employees in 62 per cent of the establishments were working full time and employees in 37 per cent were working part time.

The establishments in operation had an average of 78 per cent of a full normal force of employees, who were working an average of 92 per cent of full time; the percentages for August were 78 and 91, respectively.

TABLE 7.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN SEPTEMBER, 1930, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Food and kindred products	**1,615**	(1)	**89**	**11**	**98**	**39**	**61**	**89**
Slaughtering and meat packing	169	------	84	16	98	41	59	89
Confectionery	258	1	77	22	96	17	81	79
Ice cream	210	------	90	10	98	22	78	79
Flour	304	1	88	12	98	41	58	89
Baking	660	------	95	5	99	51	49	94
Sugar refining, cane	14	------	79	21	97	57	43	96
Textiles and their products	**1,893**	**2**	**58**	**40**	**90**	**20**	**78**	**77**
Cotton goods	443	4	41	55	84	12	84	74
Hosiery and knit goods	304	1	60	40	90	16	83	80
Silk goods	243	2	67	31	94	23	74	77
Woolen and worsted goods	177	3	53	44	91	12	84	74
Carpets and rugs	23	4	39	57	83	13	83	68
Dyeing and finishing	109	------	48	52	88	17	83	78
Clothing, men's	242	1	65	34	93	31	69	81
Shirts and collars	86	3	74	22	96	38	58	89
Clothing, women's	188	1	81	18	98	29	70	85
Millinery and lace goods	78	3	62	36	94	22	76	81
Iron and steel and their products	**1,730**	**1**	**39**	**60**	**84**	**15**	**84**	**77**
Iron and steel	139	6	54	40	87	7	87	80
Cast-iron pipe	38	5	13	82	72	5	89	78
Structural ironwork	163	1	63	37	94	24	75	87
Foundry and machine-shop products	984	1	40	60	84	13	86	75
Hardware	59	------	17	83	79	3	97	67
Machine tools	145	------	22	78	80	21	79	83
Steam fittings and steam and hot-water heating apparatus	101	1	30	69	81	22	77	74
Stoves	101	------	36	64	83	18	82	79
Lumber and its products	**1,001**	**1**	**51**	**47**	**89**	**13**	**85**	**68**
Lumber, sawmills	417	3	59	38	92	13	84	68
Lumber, millwork	255	1	47	53	90	11	89	65
Furniture	329	------	45	55	87	16	84	69
Leather and its products	**386**	**1**	**59**	**40**	**91**	**32**	**67**	**89**
Leather	115	1	65	34	93	30	70	85
Boots and shoes	271	1	57	42	91	34	65	90

[1] Less than one-half of 1 per cent.

TABLE 7.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN SEPTEMBER, 1930, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES—Continued

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Paper and printing	**1,012**	**1**	**76**	**23**	**96**	**43**	**56**	**94**
Paper and pulp	142	4	64	32	93	25	70	90
Paper boxes	162	.....	57	43	93	36	64	88
Printing, book and job	356	.....	73	27	95	39	61	94
Printing, newspapers	352	.....	93	7	100	57	43	100
Chemicals and allied products	**306**	(1)	**77**	**23**	**96**	**16**	**84**	**79**
Chemicals	119	1	69	30	94	22	77	92
Fertilizers	135	.....	76	24	97	7	93	49
Petroleum refining	52	.....	98	2	100	27	73	82
Stone, clay, and glass products	**779**	**4**	**67**	**30**	**92**	**17**	**79**	**77**
Cement	88	2	92	6	99	10	88	76
Brick, tile, and terra cotta	488	5	64	32	91	14	82	68
Pottery	94	.....	47	53	88	29	71	88
Glass	109	4	78	18	97	28	68	82
Metal products, other than iron and steel	**210**	(1)	**48**	**51**	**90**	**14**	**86**	**75**
Stamped and enameled ware	69	.....	51	49	90	14	86	81
Brass, bronze, and copper products	141	1	47	52	90	13	86	71
Tobacco products	**211**	**2**	**48**	**50**	**90**	**34**	**64**	**97**
Chewing and smoking tobacco and snuff	25	.....	60	40	95	40	60	96
Cigars and cigarettes	186	3	46	51	90	33	65	97
Vehicles for land transportation	**1,128**	.....	**62**	**38**	**93**	**16**	**84**	**70**
Automobiles	172	.....	44	56	86	20	80	67
Carriages and wagons	49	.....	61	39	92	10	90	61
Car building and repairing, electric-railroad	379	.....	92	8	99	30	70	90
Car building and repairing, steam-railroad	528	.....	45	55	90	6	94	71
Miscellaneous industries	**419**	**2**	**54**	**45**	**91**	**22**	**76**	**79**
Agricultural implements	80	5	36	59	84	9	86	64
Electrical machinery, apparatus, and supplies	162	.....	56	44	92	25	75	81
Pianos and organs	54	2	44	54	88	11	87	71
Rubber boots and shoes	8	.....	38	63	89	50	50	79
Automobile tires	35	3	23	74	85	6	91	75
Shipbuilding	80	1	88	11	99	41	58	87
All industries	**10,690**	**1**	**62**	**37**	**92**	**24**	**75**	**78**

[1] Less than one-half of 1 per cent.

2. Employment in Coal Mining in September, 1930

EMPLOYMENT in coal mining—anthracite and bituminous coal combined—increased 5.9 per cent in September as compared with August, and pay-roll totals increased 9.5 per cent.

The 1,422 mines reported had in September 305,175 employees whose earnings in one week were $7,333,877.

Anthracite

IN ANTHRACITE mining in September there was an increase in employment of 17 per cent, as compared with August, and an increase of 16.3 per cent in pay-roll totals, these increases being seasonal, in preparation for autumn demands.

Employment in September, 1930, was 7.9 per cent lower than in September, 1929, and pay-roll totals were 11.8 per cent less.

All anthracite mines reported are in Pennsylvania—the Middle Atlantic geographic division. The details for August and September are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **ANTHRACITE MINES** IN AUGUST AND SEPTEMBER, 1930

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
Middle Atlantic	**153**	**82,693**	**96,751**	**+17.0**	**$2,532,797**	**$2,944,884**	**+16.3**

Bituminous Coal

EMPLOYMENT in bituminous coal mining increased 1.5 per cent in September as compared with August, and pay-roll totals increased 5.4 per cent, as shown by reports from 1,269 mines in which there were in September, 208,424 employees, whose combined earnings in one week were $4,388,993. These increases are seasonal.

Employment in September, 1930, was 6.9 per cent lower than in September, 1929, and pay-roll totals were 24 per cent lower.

Details for each geographic division, except the New England division, for which no coal mining is reported, are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **BITUMINOUS COAL MINES** IN AUGUST AND SEPTEMBER, 1930

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
Middle Atlantic	383	60,209	58,906	−2.2	$1,275,519	$1,257,077	−1.4
East North Central	149	25,440	27,808	+9.3	518,356	627,280	+21.0
West North Central	48	4,734	5,114	+8.0	89,030	111,793	+25.6
South Atlantic	323	53,630	52,903	−1.4	1,089,476	1,100,834	+1.0
East South Central	215	44,947	45,158	+0.5	784,727	786,803	+0.3
West South Central	31	2,382	2,827	+18.7	45,874	51,911	+13.2
Mountain	112	12,893	14,519	+12.6	332,421	414,850	+24.8
Pacific	8	1,195	1,189	−0.5	30,383	38,445	+26.5
All divisions	**1,269**	**205,430**	**208,424**	**+1.5**	**4,165,786**	**4,388,993**	**+5.4**

3. Employment in Metalliferous Mining in September, 1930

METALLIFEROUS mines in September showed a decrease in employment of 1.2 per cent as compared with August, and a decrease of 1.5 per cent in pay-roll totals. The 340 mines covered had in September 49,974 employees whose combined earnings in one week were $1,351,627.

Employment in September, 1930, was 23.5 per cent lower than in September, 1929, and pay-roll totals were 31.5 per cent lower.

Details for each geographic division from which metalliferous mining is reported are shown in the following table.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **METALLIFEROUS MINES** IN AUGUST AND SEPTEMBER, 1930

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
Middle Atlantic	7	1,428	1,370	−4.1	$37,980	$36,193	−4.7
East North Central	48	12,478	12,417	−0.5	294,259	291,217	−1.0
West North Central	53	7,878	7,656	−2.8	233,655	236,848	+1.4
East South Central	14	3,464	3,401	−1.8	67,792	66,487	−1.9
West South Central	64	2,549	2,730	+7.1	61,892	66,052	+6.7
Mountain	122	20,331	20,042	−1.4	603,731	583,916	−3.3
Pacific	32	2,454	2,358	−3.9	72,363	70,914	−2.0
All divisions	**340**	**50,582**	**49,974**	**−1.2**	**1,371,672**	**1,351,627**	**−1.5**

4. Employment in Quarrying and Nonmetallic Mining in September, 1930

A DECREASE of 1.8 per cent in employment and a decrease in earnings of 3.9 per cent from August to September were shown by reports received from 751 establishments in this industrial group.

These establishments had in September 37,229 employees whose combined pay roll in one week was $921,460.

Employment in September, 1930, was 17.7 per cent lower than in September, 1929, and pay-roll totals were 24.9 per cent lower.

Details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **QUARRIES AND NONMETALLIC MINES** IN AUGUST AND SEPTEMBER, 1930

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
New England	109	5,144	5,041	−2.0	$150,596	$148,098	−1.7
Middle Atlantic	123	7,593	7,471	−1.6	202,783	197,079	−2.8
East North Central	222	9,994	9,861	−1.3	297,522	278,261	−6.5
West North Central	72	2,589	2,427	−6.3	61,755	55,608	−10.0
South Atlantic	96	5,771	5,739	−0.6	107,227	105,910	−1.2
East South Central	53	2,966	2,814	−5.1	45,274	45,059	−0.5
West South Central	38	2,531	2,589	+2.3	55,385	54,357	−1.9
Mountain	5	103	69	−33.0	3,118	2,280	−26.9
Pacific	33	1,228	1,218	−0.8	34,977	34,808	−0.5
All divisions	**751**	**37,919**	**37,229**	**−1.8**	**958,637**	**921,460**	**−3.9**

5. Employment in Crude Petroleum Producing in September, 1930

REPORTS received from 547 crude petroleum producing establishments in September showed a decrease of 3.1 per cent in employment with a decrease of 2.3 per cent in pay-roll totals as compared with August. The establishments reporting had in September 30,916 employees whose combined earnings in one week were $1,132,499.

As data for this industry were not collected for the months prior to January, 1930, no comparison with September, 1929, can be made at this time.

Details for each geographic division, except New England, for which no production is reported, are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL CRUDE PETROLEUM PRODUCING COMPANIES IN AUGUST AND SEPTEMBER, 1930

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
Middle Atlantic	41	818	781	−4.5	$22,022	$20,911	−5.0
East North Central	3	42	54	+28.6	1,504	1,432	−4.8
West North Central	18	117	159	+35.9	2,839	3,258	+14.8
South Atlantic	13	599	591	−1.3	16,518	16,290	−1.4
East South Central	4	277	267	−3.6	6,585	6,615	+0.5
West South Central	376	21,365	20,590	−3.6	750,248	732,568	−2.4
Mountain	19	321	312	−2.8	11,542	11,590	+0.4
Pacific	73	8,356	8,162	−2.3	347,319	339,835	−2.2
All divisions	**547**	**31,895**	**30,916**	**−3.1**	**1,158,577**	**1,132,499**	**−2.3**

6. Employment in Public Utilities in September, 1930

EMPLOYMENT in 11,575 establishments—telephone and telegraph companies, power, light, and water companies, and electric railroads, combined—decreased 1.5 per cent in September as compared with August, and pay-roll totals decreased 0.7 per cent. These establishments had in September 755,253 employees whose combined earnings in one week were $22,743,681.

Employment in public utilities was 4.7 per cent lower in September, 1930, than in September, 1929, while pay-roll totals were 2.4 per cent lower.

Data for the three groups into which public utilities have been separated follow.

Telephone and Telegraph

EMPLOYMENT in telephone and telegraph companies was 2 per cent lower in September than in August and earnings were 0.3 per cent lower. The 7,968 establishments reporting had in September 342,815 employees whose combined earnings in one week were $9,822,825.

Employment in September, 1930, was 5.6 per cent below the level of September, 1929, but pay-roll totals were 1.8 per cent higher in September, 1930, than in September, 1929.

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **TELEPHONE AND TELEGRAPH** ESTABLISHMENTS IN AUGUST AND SEPTEMBER, 1930

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
New England	711	31,048	31,034	−(1)	$930,530	$939,223	+0.9
Middle Atlantic	1,230	111,805	109,423	−2.1	3,523,602	3,472,019	−1.5
East North Central	1,478	79,564	77,764	−2.3	2,145,797	2,150,547	+0.2
West North Central	1,312	32,598	31,756	−2.6	792,576	786,181	−0.8
South Atlantic	563	22,332	21,943	−1.7	584,474	590,431	+1.0
East South Central	592	11,216	10,912	−2.7	246,327	240,236	−2.5
West South Central	688	19,738	19,301	−2.2	438,295	436,637	−0.4
Mountain	482	8,536	8,305	−2.7	200,744	203,261	+1.3
Pacific	912	32,820	32,377	−1.3	989,338	1,004,290	+1.5
All divisions	**7,968**	**349,657**	**342,815**	**−2.0**	**9,851,683**	**9,822,825**	**−0.3**

(1) Less than one-tenth of 1 per cent.

Power, Light, and Water

EMPLOYMENT in power, light, and water plants was 1.1 per cent lower in September than in August, and pay-roll totals were 0.5 per cent lower. The 3,138 establishments reporting had in September 262,099 employees whose combined earnings in one week were $8,241,631.

Employment in September, 1930, was 0.3 per cent lower than in September, 1929, and pay-roll totals were 0.5 per cent lower.

Details for each geographic division are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **POWER, LIGHT, AND WATER** COMPANIES IN AUGUST AND SEPTEMBER, 1930

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
New England	249	22,551	22,224	−1.4	$734,959	$732,878	−0.3
Middle Atlantic	346	69,707	68,490	−1.7	2,222,407	2,231,502	+0.4
East North Central	651	59,739	59,595	−0.2	1,993,536	1,950,786	−2.1
West North Central	408	30,540	30,407	−0.4	886,780	887,228	+0.1
South Atlantic	259	24,552	24,469	−0.3	730,125	736,212	+0.8
East South Central	166	8,441	8,330	−1.3	202,587	201,654	−0.5
West South Central	584	18,019	17,295	−4.0	497,230	484,099	−2.6
Mountain	132	6,647	6,288	−5.4	203,609	195,913	−3.8
Pacific	343	24,884	25,001	+0.5	811,759	821,359	+1.2
All divisions	**3,138**	**265,080**	**262,099**	**−1.1**	**8,282,992**	**8,241,631**	**−0.5**

Electric Railroads

EMPLOYMENT in the operation and maintenance of electric railroads, exclusive of car shops, decreased 1.2 per cent from August to September and pay-roll totals decreased 1.7 per cent. The 469 establishments reporting had in September 150,339 employees, whose combined earnings in one week were $4,679,225.

Employment in September, 1930, was 9.5 per cent lower than in September, 1929, and pay-roll totals were 10.8 per cent lower.

Details for each geographic division are shown in Table 3.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN THE OPERATION AND MAINTENANCE OF IDENTICAL **ELECTRIC RAILROADS** IN AUGUST AND SEPTEMBER, 1930

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
New England	49	14,225	14,341	+0.8	$517,002	$515,805	−0.2
Middle Atlantic	111	39,705	38,910	−2.0	1,216,050	1,171,252	−3.7
East North Central	108	47,036	46,279	−1.6	1,527,031	1,508,360	−1.2
West North Central	65	14,748	14,594	−1.0	443,602	434,193	−2.1
South Atlantic	44	8,075	7,996	−1.0	224,629	222,016	−1.2
East South Central	11	3,918	3,792	−3.2	102,338	105,280	+2.9
West South Central	30	5,208	5,180	−0.5	134,959	132,480	−1.8
Mountain	15	2,296	2,328	+1.4	63,282	63,546	+0.4
Pacific	36	16,969	16,919	−0.3	529,007	526,293	−0.5
All divisions	**469**	**152,180**	**150,339**	**−1.2**	**4,757,900**	**4,679,225**	**−1.7**

7. Employment in Wholesale and Retail Trade in September, 1930

EMPLOYMENT in 9,552 establishments—wholesale and retail trade combined—increased 5.9 per cent in September as compared with August, and pay-roll totals increased 4.1 per cent. These establishments had in September 332,117 employees, whose combined earnings in one week were $8,494,189.

Wholesale Trade

EMPLOYMENT in wholesale trade alone decreased 0.2 per cent in September as compared with August, and pay-roll totals decreased less than one-tenth of 1 per cent. The 2,029 establishments reporting had in September 64,894 employees and pay-roll totals of $2,012,194.

Employment in September, 1930, was 7 per cent lower than in September, 1929, and pay-roll totals were 9.4 per cent lower.

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **WHOLESALE TRADE** ESTABLISHMENTS IN AUGUST AND SEPTEMBER, 1930

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
New England	166	3,859	3,975	+3.0	$109,950	$110,956	+0.9
Middle Atlantic	307	9,804	9,907	+1.1	311,013	315,917	+1.6
East North Central	270	12,424	12,445	+0.2	398,939	391,347	−1.9
West North Central	265	14,215	14,142	−0.5	420,527	422,835	+0.5
South Atlantic	276	4,113	4,130	+0.4	122,123	123,204	+0.9
East South Central	62	1,677	1,671	−0.4	48,551	48,974	+0.9
West South Central	266	6,103	6,026	−1.3	182,610	179,663	−1.6
Mountain	78	1,791	1,774	−0.9	60,225	60,305	+0.1
Pacific	339	11,020	10,824	−1.8	359,060	358,993	[1]
All divisions	**2,029**	**65,006**	**64,894**	**−0.2**	**2,012,998**	**2,012,194**	[1]

[1] Less than one-tenth of 1 per cent.

Retail Trade

EMPLOYMENT in retail trade increased 7.5 per cent in September and pay-roll totals increased 5.5 per cent, these increases being seasonal.

The 7,523 establishments from which reports were received had in September 267,223 employees whose earnings in one week were $6,481,995.

Employment in September, 1930, was 5.7 per cent lower than in September, 1929, and pay-roll totals were 6.9 per cent lower.

Details by geographic divisions are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **RETAIL TRADE** ESTABLISHMENTS IN AUGUST AND SEPTEMBER, 1930

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
New England	86	12,267	12,429	+1.3	$301,329	$300,164	−0.4
Middle Atlantic	387	63,836	72,554	+13.7	1,799,454	1,962,571	+9.1
East North Central	2,788	73,842	78,846	+6.8	1,871,687	1,938,848	+3.6
West North Central	684	19,166	20,689	+7.9	422,906	461,128	+9.0
South Atlantic	978	19,010	19,917	+4.8	413,559	431,859	+4.4
East South Central	415	6,878	7,513	+9.2	136,548	144,822	+6.1
West South Central	288	11,131	11,685	+5.0	225,701	242,149	+7.3
Mountain	177	3,380	3,514	+4.0	74,160	76,156	+2.7
Pacific	1,720	39,101	40,076	+2.5	898,302	924,298	+2.9
All divisions	**7,523**	**248,611**	**267,223**	**+7.5**	**6,143,646**	**6,481,995**	**+5.5**

8. Employment in Hotels in September, 1930

EMPLOYMENT in hotels decreased 1.4 per cent in September as compared with August, and pay-roll totals decreased 1.5 per cent. The 2,117 hotels reporting had in September 162,612 employees whose earnings in one week were $2,720,718.

There were slight increases in employment in the East North Central and the East South Central divisions while all other divisions reported small decreases as compared with employment in August. The greatest decreases were in the New England, Middle Atlantic, and Mountain divisions and resulted from the closing of seasonal resort hotels.

Employment in September, 1930, was 2.6 per cent lower than in September 1929, and pay-roll totals were 3.1 per cent lower.

Per capita earnings, obtained by dividing the total number of employees into the total amount of pay roll, should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only, with no regard as to the value of room or board furnished employees, and, of course, no satisfactory estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities but among hotels in one locality and among employees in one hotel. Some employees are furnished board and room, others are given board only for 1, 2, or 3 meals, while the division of tips is made in many ways.

Per capita earnings are further reduced by the considerable amount of part-time employment in hotels caused by conventions and banquets or other functions.

The details for each geographic division are shown in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL HOTELS IN AUGUST AND SEPTEMBER, 1930

Geographic division	Hotels	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
New England	133	11,199	10,853	−3.1	$173,423	$168,218	−3.0
Middle Atlantic	419	54,068	52,644	−2.6	969,543	937,661	−3.3
East North Central	429	34,779	35,124	+1.0	601,358	605,879	+0.8
West North Central	229	13,319	13,171	−1.1	193,544	193,652	+0.1
South Atlantic	180	11,855	11,834	−0.2	173,430	175,592	+1.2
East South Central	80	5,666	5,703	+0.7	69,892	71,252	+1.9
West South Central	146	9,704	9,548	−1.6	133,287	128,451	−3.6
Mountain	124	5,369	4,997	−6.9	88,141	85,871	−2.6
Pacific	377	18,950	18,738	−1.1	359,557	354,142	−1.5
All divisions	**2,117**	**164,909**	**162,612**	**−1.4**	**2,762,175**	**2,720,718**	**−1.5**

9. Employment in Canning and Preserving in September, 1930

CANNING and preserving establishments reported a seasonal increase of 32.8 per cent in employment in September as compared with August and an increase of 24.9 per cent in pay-roll totals. September, generally speaking, is the peak season for canning and preserving—that is, the greatest number of wage earners are employed and pay-roll totals are highest. In September, 1930, each of the nine geographic divisions showed substantial increases in both employment and pay-roll totals, with the single exception of the Pacific division, which coupled an increase of more than 15 per cent in employment with a decrease of 3.7 per cent in employees' earnings. This condition was due apparently to the great range of this division—from Mexico to Canada—and the consequent variation in the peak season for the several crops, employees in some establishments having finished their season in the early days of period reported, while in other establishments employees worked at full time throughout the period, and in still other establishments considerable numbers of wage earners were taken on toward the end of the period with resultant small earnings to report.

Reports were received from 935 establishments having in September 123,458 employees and pay-roll totals in one week of $2,003,728.

Employment in September, 1930, was 17.4 per cent higher than in September, 1929, and pay-roll totals were 3.3 per cent higher.

Details by geographic divisions are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **CANNING AND PRESERVING** ESTABLISHMENTS IN AUGUST AND SEPTEMBER, 1930

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		August, 1930	September, 1930		August, 1930	September, 1930	
New England	93	4,569	7,459	+63.3	$61,372	$115,787	+88.7
Middle Atlantic	80	12,151	17,733	+45.9	218,329	344,860	+58.0
East North Central	236	14,211	21,366	+50.3	185,399	325,614	+75.6
West North Central	67	3,842	6,800	+77.0	44,547	102,339	+129.7
South Atlantic	126	4,287	7,676	+79.1	39,731	82,696	+108.1
East South Central	35	1,988	2,598	+30.7	19,325	20,650	+6.9
West South Central	38	1,981	2,000	+1.0	11,246	12,984	+15.5
Mountain	54	5,631	6,774	+20.3	70,796	80,160	+13.2
Pacific	206	44,330	51,052	+15.2	953,516	918,638	−3.7
All divisions	**935**	**92,990**	**123,458**	**+32.8**	**1,604,261**	**2,003,728**	**+24.9**

Indexes of Employment and Pay-Roll Totals—Mining, Quarrying, Public Utilities, Trade, Hotels, and Canning

THE following table shows the index numbers of employment and pay-roll totals for anthracite, bituminous coal, and metalliferous mining, quarrying, telephone and telegraph, power–light–water, electric railroad, wholesale and retail trade, hotels, and canning and preserving, from January, 1929, to September, 1930, with the monthly average for 1929 as 100.

INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS, JANUARY, 1929, TO SEPTEMBER, 1930—MINING, QUARRYING, PUBLIC UTILITIES, TRADE, HOTELS, AND CANNING

[Monthly average, 1929=100]

Year and month	Anthracite mining		Bituminous coal mining		Metalliferous mining		Quarrying and non-metallic mining		Telephone and telegraph		Power, light, and water		Operation and maintenance of electric railroads [1]		Wholesale trade		Retail trade		Hotels		Canning and preserving	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1929																						
January	105.7	100.7	106.4	106.1	93.1	88.0	91.6	85.9	94.3	94.5	92.9	91.7	99.7	98.7	97.7	96.7	99.2	99.0	97.1	98.5	50.8	57.3
February	106.0	122.1	107.7	116.6	94.6	91.8	91.9	88.9	95.3	93.0	92.6	91.8	99.1	97.6	96.9	96.4	94.6	94.5	99.8	102.0	48.9	59.2
March	98.0	90.8	106.8	108.6	97.0	99.1	96.0	95.0	96.5	98.7	92.8	94.5	97.0	98.0	97.3	98.5	96.2	96.1	100.9	103.4	49.4	54.9
April	100.7	88.3	100.2	89.2	100.6	104.6	99.6	100.5	97.8	98.3	95.9	95.5	98.5	99.5	97.9	97.8	95.5	96.0	99.7	100.6	90.6	98.9
May	103.7	99.0	96.6	91.9	100.8	104.6	104.1	107.1	100.4	99.4	98.4	98.1	100.4	101.0	99.0	99.0	97.3	97.1	98.1	98.9	62.0	71.2
June	92.9	80.7	94.7	90.0	103.8	105.6	106.6	110.5	101.5	100.0	100.7	100.4	101.2	101.7	99.2	98.6	97.4	98.6	99.3	98.7	76.6	71.9
July	83.2	64.7	94.1	85.6	101.5	99.0	104.7	104.7	102.6	104.1	103.2	102.3	102.2	101.9	100.4	100.5	93.6	95.9	101.1	99.8	126.8	109.2
August	91.1	78.4	95.7	92.8	103.2	100.1	106.7	110.3	103.7	101.8	105.4	103.8	102.2	102.0	101.3	100.0	93.6	95.2	102.6	99.4	184.8	180.1
September	101.9	103.8	97.2	98.6	102.1	102.0	106.6	109.8	102.5	100.4	105.5	106.6	101.4	101.5	101.9	103.3	97.6	99.2	102.8	100.2	210.1	207.9
October	106.1	133.9	98.8	106.8	101.9	103.1	103.6	105.8	101.9	105.1	105.7	106.0	100.5	100.0	102.9	102.7	101.7	102.6	100.6	100.2	143.3	134.5
November	104.0	100.5	101.0	106.0	103.0	102.2	98.6	96.0	101.9	101.2	104.7	104.1	99.4	98.4	102.9	101.9	106.7	105.2	100.0	99.8	95.1	91.6
December	107.1	137.2	101.3	108.2	98.5	99.7	90.1	85.4	101.8	103.9	102.5	105.8	98.3	99.8	102.6	104.7	126.2	120.6	97.7	98.9	61.3	63.4
Average	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
1930																						
January	102.1	105.8	102.5	101.4	95.7	92.7	79.6	71.9	101.6	105.1	99.6	99.7	97.1	97.8	100.0	100.0	98.9	99.7	100.4	100.3	46.1	50.3
February	106.9	121.5	102.4	102.1	92.3	92.5	79.8	73.5	100.2	101.9	98.8	100.4	95.1	95.7	98.5	98.3	94.4	96.0	102.4	103.8	45.7	51.5
March	82.6	78.5	98.6	86.4	90.9	90.8	83.0	86.0	99.4	105.8	99.7	102.1	94.4	95.4	97.7	99.7	93.9	95.5	102.4	104.4	49.7	50.8
April	84.1	75.0	94.4	81.7	89.3	88.3	87.4	85.4	98.9	103.4	100.7	102.6	95.2	97.1	97.3	97.9	97.3	97.5	100.1	100.3	74.8	72.6
May	93.8	98.8	90.4	77.5	87.5	85.6	90.8	90.2	99.7	103.2	103.4	104.5	95.2	96.0	96.8	97.4	96.7	97.3	98.0	98.4	65.7	66.9
June	90.8	94.3	88.4	75.6	84.6	81.6	90.3	90.9	99.8	103.4	104.6	107.8	94.8	97.0	96.5	98.6	93.9	96.8	98.0	98.1	83.0	81.5
July	91.6	84.0	88.0	68.9	80.5	71.9	89.9	85.5	100.0	106.6	105.9	106.7	95.3	95.6	96.0	96.0	89.0	91.7	101.3	99.8	126.3	112.7
August	80.2	78.8	89.2	71.1	79.0	71.0	89.3	85.8	98.8	102.5	106.4	106.6	92.9	92.1	95.0	93.6	85.6	87.6	101.5	98.6	185.7	172.0
September	93.8	91.6	90.5	74.9	78.1	69.9	87.7	82.5	96.8	102.2	105.2	106.1	91.8	90.5	94.8	93.6	92.0	92.4	100.1	97.1	246.6	214.8

[1] Not including car building and repairing, electric railroads; see vehicles group, manufacturing industries, page 201, et seq.

Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to August, 1930, on Class I railroads—that is, all roads having operating revenues of $1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON **CLASS I STEAM RAILROADS** IN THE UNITED STATES, JANUARY, 1923, TO AUGUST, 1930

[Monthly average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930
January	98.3	96.9	95.6	95.8	95.5	89.3	88.2	86.3
February	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4
March	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5
April	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0
May	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6
June	107.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5
July	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7
August	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7
September	107.8	99.7	99.9	102.8	99.1	95.3	96.8	----
October	107.3	100.8	100.7	103.4	98.9	95.3	96.9	----
November	105.2	99.0	99.1	101.2	95.7	92.9	93.0	----
December	99.4	96.0	97.1	98.2	91.9	89.7	88.8	----
Average	**104.1**	**98.3**	**97.9**	**100.0**	**97.5**	**92.9**	**93.3**	[1] **86.0**

[1] Average for 8 months.

Table 2 shows the total number of employees on the 15th day each of August, 1929, and July and August, 1930, and pay-roll totals for the entire months.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—AUGUST, 1929, AND JULY AND AUGUST, 1930

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	August, 1929	July, 1930	August, 1930	August, 1929	July, 1930	August, 1930
Professional, clerical, and general	**272,653**	**252,527**	**249,931**	**$40,544,538**	**$37,434,769**	**$36,951,757**
Clerks	154,270	140,357	138,835	21,929,782	19,702,239	19,396,109
Stenographers and typists	24,787	23,363	23,070	3,284,615	3,071,511	3,031,083
Maintenance of way and structures	**477,724**	**383,985**	**374,499**	**46,743,927**	**36,081,045**	**35,325,981**
Laborers, extra gang, and work train	93,332	59,930	54,200	7,947,370	4,524,676	4,149,142
Laborers, track, and roadway section	241,333	198,084	195,626	18,732,418	14,356,168	14,158,051
Maintenance of equipment and stores	**454,135**	**397,588**	**393,456**	**65,345,851**	**52,067,759**	**51,313,475**
Carmen	99,363	83,768	83,406	16,578,978	12,445,325	12,253,171
Machinists	54,118	50,129	49,682	9,406,443	7,681,863	7,604,721
Skilled trades helpers	101,547	87,168	86,259	12,608,426	9,651,256	9,469,566
Laborers (shops, engine-houses, power plants, and stores)	36,952	33,120	32,763	3,641,387	3,187,491	3,143,026
Common laborers (shops, engine houses, power plants, and stores)	52,588	44,072	43,358	4,479,537	3,375,465	3,306,961

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—AUGUST, 1929, AND JULY AND AUGUST, 1930—Continued

Occupation	Number of employees at middle of month			Total earnings		
	August, 1929	July, 1930	August, 1930	August, 1929	July, 1930	August, 1930
Transportation, other than train, engine, and yard	**197,992**	**180,585**	**178,521**	**$25,776,403**	**$23,165,773**	**$22,865,171**
Station agents	29,348	28,758	28,683	4,828,789	4,684,152	4,611,223
Telegraphers, telephoners, and towermen	23,300	21,654	21,487	3,707,194	3,439,638	3,411,635
Truckers (stations, warehouses, and platforms)	33,949	27,273	26,646	3,424,898	2,556,581	2,542,170
Crossing and bridge flagmen and gatemen	20,650	19,887	19,864	1,602,056	1,562,882	1,550,934
Transportation (yard masters, switch tenders, and hostlers)	**21,930**	**20,148**	**20,103**	**4,461,158**	**4,027,984**	**4,017,671**
Transportation, train and engine	**318,150**	**280,309**	**281,362**	**69,074,672**	**57,151,833**	**57,354,877**
Road conductors	36,173	32,180	32,036	9,260,548	7,873,170	7,839,611
Road brakemen and flagmen	70,462	61,929	61,821	13,330,067	10,939,097	10,948,905
Yard brakemen, and yard helpers	53,607	46,613	47,129	10,090,000	8,102,791	8,208,096
Road engineers and motormen	42,483	38,018	38,083	12,407,967	10,398,275	10,434,712
Road firemen and helpers	42,842	38,598	38,757	9,134,093	7,607,948	7,613,228
All employees	**1,742,584**	**1,515,142**	**1,497,872**	**251,946,549**	**209,929,143**	**207,828,332**

Changes in Employment and Pay Rolls in Various States

THE following data as to changes in employment and pay rolls have been compiled from reports received from the various State labor offices:

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

Monthly period

State, and industry group	Per cent of change, July to August, 1930		State, and industry group	Per cent of change, August to September, 1930	
	Employment	Pay roll		Employment	Pay roll
Illinois			**Iowa**		
Stone, clay and glass products	+3.7	+1.3	Food and kindred products	0.0	
Metals, machinery, and conveyances	−.8	−2.9	Textiles	+3.0	
Wood products	−2.1	+3.1	Iron and steel works	+.8	
Furs and leather goods	−1.0	+3.0	Lumber products	+7.9	
Chemicals, oils, paints, etc.	−4.8	−5.6	Leather products	−4.4	
Printing and paper goods	−2.1	−2.0	Paper products, printing and publishing	−1.4	
Textiles	−10.0	+.6	Patent medicines, chemicals, and compounds	+6.3	
Clothing and millinery	+3.4	+9.7	Stone and clay products	+3.0	
Food, beverages, and tobacco	−.9	−3.3	Tobacco and cigars	+3.8	
Miscellaneous	+1.0	−.1	Railway-car shops	−45.3	
			Various industries	−1.1	
All manufacturing	−.9	−1.8	All industries	−1.8	
Trade, wholesale and retail	+.2	−3.8	**Maryland**		
Services	−1.1	+10.4	Food products	+6.1	+8.6
Public utilities	−2.2	+1.5	Textiles	−1.1	−.3
Coal mining	+5.4	+32.0	Iron and steel, and their products	−.3	+6.1
Building and contracting	−2.1	−1.8	Lumber and its products	+4.3	+11.2
All nonmanufacturing	−1.1	+2.3	Leather and its products	+.3	+1.5
All industries	−1.0	−.2	Rubber tires	+14.5	+29.0

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Per cent of change, August to September, 1930	
	Employment	Pay roll
Maryland—Continued		
Paper and printing	−0.2	+0.1
Chemicals and allied products	+5.6	+6.8
Stone, clay, and glass products	+4.4	−6.6
Metal products other than iron and steel	−1.5	+1.0
Tobacco products	+9.5	+7.2
Transportation equipment	+4.2	−3.2
Car building and repairing	+1.1	−3.2
Miscellaneous	+19.2	−.3
All manufacturing	+1.7	+4.3
Retail establishments	+2.5	+.02
Wholesale establishments	−8.4	−1.9
Public utilities	−.2	−.9
Coal mines	+.1	+8.5
Hotels	−.8	+14.3
Quarries	+6.5	+7.4

	Employment—index numbers (1925–1927 =100)	
	July, 1930	August, 1930
Massachusetts		
Boot and shoe cut stock and findings	99.7	104.5
Boots and shoes	76.3	84.4
Bread and other bakery products	109.5	105.1
Clothing, men's	85.5	84.5
Clothing, women's	90.4	101.4
Confectionery	84.5	87.2
Cotton goods	49.8	49.6
Dyeing and finishing textiles	76.6	82.2
Electrical machinery, apparatus, and supplies	68.6	65.8
Foundry and machine-shop products	99.4	99.1
Furniture	76.0	75.7
Hosiery and knit goods	69.3	67.3
Leather, tanned, curried, and finished	92.2	94.7
Paper and wood pulp	85.2	87.3
Printing and publishing	102.3	101.9
Rubber footwear	73.2	73.2
Rubber goods, tires, and tubes	60.7	56.5
Silk goods	68.1	58.0
Textile machinery and parts	59.3	56.8
Woolen and worsted goods	69.2	70.0
All industries	71.5	72.8

State, and industry group	Per cent of change, June to July, 1930	
	Employment	Pay roll
New Jersey		
Food and kindred products	+3.0	+2.2
Textiles and their products	−.2	−3.0
Iron and steel and their products	−3.9	−3.3
Lumber and its products	−3.9	−9.3
Leather and its products	−3.1	−1.4
Tobacco products	+1.6	−3.0
Paper and printing	+.0	−.8
Chemicals and allied products	−1.1	−1.8
Stone, clay, and glass products	−2.0	−4.8
Metal products other than iron and steel	−5.9	−7.8
Vehicles for land transportation	−3.0	−11.6
Miscellaneous	+8.5	+7.2
All industries	−.7	−2.2

	August to September, 1930	
New York		
Stone, clay and glass	+2.1	+1.5
Miscellaneous stone and minerals	+.6	+1.1
Lime, cement, and plaster	−3.4	+2.6
Brick, tile, and pottery	+12.6	+11.8
Glass	−3.4	−8.0
Metals and machinery	−1.7	−1.5
Silver and jewelry	+.7	+3.0
Brass, copper and aluminum	−2.6	−4.4
Iron and steel	−5.5	+4.5
Structural and architectural iron	−6.7	−9.7
Sheet metal and hardware	+.9	+2.0
Firearms, tools, and cutlery	+1.2	+.6
Cooking, heating, and ventilating apparatus	+.2	+3.3
Machinery, including electrical apparatus	−2.2	−3.0
Automobiles, carriages, and airplanes	+.6	+3.8
Railroad equipment and repair	−1.0	−5.6
Boat and ship building	−9.9	−7.8
Instruments and appliances	−.7	+.9
Wood manufactures	+.9	+2.3
Saw and planing mills	−7.8	−7.2
Furniture and cabinetwork	+2.2	+2.0
Pianos and other musical instruments	+12.4	+13.7
Miscellaneous wood	−.1	+5.8

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Per cent of change, August to September, 1930	
	Employment	Pay roll
New York—Continued		
Furs, leather, and rubber goods	+1.3	+4.9
Leather	+1.7	−1.4
Furs and fur goods	+13.4	+23.8
Shoes	−2.6	−3.6
Other leather and canvas goods	+15.0	+31.2
Rubber and gutta percha	−.2	+6.4
Pearl, horn, bone, etc.	+5.4	−1.6
Chemicals, oils, paints, etc.	+.1	+3.2
Drugs and chemicals	+2.5	+1.8
Paints and colors	+3.6	+1.7
Oil products	+1.3	+5.6
Miscellaneous chemicals	−2.9	+2.4
Paper	−.3	+2.6
Printing and paper goods	+1.0	+1.4
Paper boxes and tubes	+1.8	+5.0
Miscellaneous paper goods	+8.1	+8.2
Printing and book making	−.1	+.4
Textiles	+5.3	+6.6
Silk and silk goods	+1.4	+4.2
Wool manufactures	−4.2	−3.3
Cotton goods	+150.0	+130.6
Knit goods (excluding silk)	+6.4	+11.5
Other textiles	+1.1	+2.0
Clothing and millinery	+9.4	+17.3
Men's clothing	−1.6	−6.0
Men's furnishings	+4.5	+11.4
Women's clothing	+25.0	+37.6
Women's underwear	+10.4	+16.4
Women's headwear	+30.8	+45.6
Miscellaneous sewing	+12.2	+18.0
Laundering and cleaning	+2.0	+5.6
Food and tobacco	+9.3	+9.6
Flour, feed, and cereals	+2.3	+2.8
Canning and preserving	+59.2	+84.9
Other groceries	−6.8	−1.3
Meat and dairy products	−.1	+1.2
Bakery products	+1.3	+5.4
Candy	+16.7	+21.0
Beverages	+2.0	−6.9
Tobacco	+8.0	+5.9
Water, light, and power	−.2	+1.2
All industries	+2.3	+3.7
Oklahoma		
Cottonseed-oil mills	+48.0	+11.8
Food production:		
Bakeries	+2.9	+5.5
Confections	+64.2	+50.8
Creameries and dairies	+14.1	+3.7
Flour mills	+4.1	+30.4
Ice and ice cream	−10.1	−10.7
Meat and poultry	+11.1	+11.9
Lead and zinc:		
Mines and mills	+4.3	+6.7
Smelters	+36.4	+21.7
Metals and machinery:		
Auto repairs, etc.	−8.9	−16.6
Machine shops and foundries	−15.2	−25.8
Tank construction and erection	−13.1	−14.5

State, and industry group	Per cent of change, August to September, 1930	
	Employment	Pay roll
Oklahoma—Continued		
Oil industry:		
Producing and gasoline manufacture	−7.1	−6.9
Refineries	+2.5	+1.3
Printing: Job work	+2.1	−.6
Public utilities:		
Steam-railway shops	+6.0	+3.2
Street railways	−5.9	−9.4
Water, light, and power	−4.6	−6.1
Stone, clay, and glass:		
Brick and tile	−1.9	−4.1
Cement and plaster	+9.8	−3.9
Crushed stone	+6.3	+6.4
Glass manufacture	−28.1	−29.9
Textiles and cleaning:		
Textile manufacture	+3.1	+15.4
Laundries, etc.	−3.6	−1.9
Woodworking:		
Sawmills	−8.2	+.1
Millwork, etc.	+3.8	−2.4
All industries	−.2	−1.5

	Index numbers (1923–1925=100)—employment	
	August, 1930	September, 1930
Pennsylvania		
Metal products	86.5	86.7
Transportation equipment	66.7	69.8
Textile products	85.9	91.2
Foods and tobacco	108.0	109.8
Stone, clay, and glass products	66.0	66.2
Lumber products	76.7	75.7
Chemical products	94.8	91.7
Leather and rubber products	98.7	100.3
Paper and printing	97.4	97.3
All manufacturing	87.4	88.8
	Pay roll	
Metal products	83.4	80.5
Transportation equipment	59.3	59.6
Textile products	73.5	83.0
Foods and tobacco	100.8	104.3
Stone, clay, and glass products	59.3	55.7
Lumber products	71.3	70.7
Chemical products	99.0	94.3
Leather and rubber products	102.9	104.2
Paper and printing	101.3	102.6
All manufacturing	81.9	82.4

[1] Preliminary figures.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Per cent of change, July to August, 1930	
	Employment	Pay roll
Wisconsin		
Manual		
Logging	−2.8	−8.1
Mining:		
Lead and zinc	+22.8	+9.3
Iron	−.7	−10.3
Stone crushing and quarrying	−18.0	−12.5
Manufacturing:		
Stone and allied industries	−4.3	+1.8
Metal	−8.4	−2.9
Wood	−4.6	−1.5
Rubber	+68.0	+40.9
Leather	+1.0	+5.4
Paper	−1.5	+6.4
Textiles	−4.8	+.9
Foods	−7.1	−11.5
Printing and publishing	+.1	+1.2
Chemicals (including soap, glue, and explosives)	−2.3	−9.1
All manufacturing	−4.3	−.9
Construction:		
Building	−1.9	−2.5
Highway	+8.6	+1.6
Wisconsin—Continued		
Manual—Continued		
Construction—Continued.		
Railroad	+0.1	−0.8
Marine dredging, sewer digging	−30.4	−14.3
Communication:		
Steam railways	+.3	+1.4
Electric railways	+4.1	−2.7
Express, telephone, and telegraph	−3.0	−7.7
Light and power	+7.9	+6.6
Wholesale trade	+2.9	−4.5
Hotels and restaurants	−.5	
Laundering and dyeing	−.9	−1.7
Nonmanual		
Manufacturing, mines, and quarries	−.1	−1.9
Construction	.0	−.2
Communication	−1.7	−5.5
Wholesale trade	−1.5	−1.8
Retail trade, sales force only	−3.3	−4.8
Miscellaneous professional services	+1.7	−6.3

Yearly period

State, and industry group	Per cent of change, August, 1929, to August, 1930	
	Employment	Pay roll
California		
Stone, clay, and glass products	−21.2	−23.7
Metals, machinery, and conveyances	−19.3	−25.8
Wood manufactures	−23.7	−28.2
Leather and rubber goods	−32.8	−37.6
Chemicals, oils, paints, etc.	−22.3	−27.6
Printing and paper goods	−2.7	−3.9
Textiles	−10.4	−8.5
Clothing, millinery, and laundering	−12.1	−14.3
Foods, beverages, and tobacco	+8.0	+11.4
Miscellaneous	−16.1	−11.6
All industries	−12.2	−15.3
Public utilities	+4.2	+4.7

State, and industry group	Employment—index numbers (1925–1927 = 100)	
	August, 1929	August, 1930
Massachusetts		
Boot and shoe cut stock and findings	119.6	104.5
Boots and shoes	88.9	84.4
Bread and other bakery products	111.9	105.1
Clothing, men's	95.3	84.5
Clothing, women's	115.0	101.4
Confectionery	92.8	87.2
Cotton goods	75.4	49.6
Dyeing and finishing textiles	84.2	82.2
Electrical machinery, apparatus and supplies	101.2	65.8
Foundry and machine-shop products	109.7	99.1
Furniture	92.9	75.7
Hosiery and knit goods	75.2	67.3
Leather, tanned, curried, and finished	107.6	94.7

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period—Continued

State, and industry group	Employment—index numbers (1925–1927 = 100)	
	August, 1929	August, 1930
Massachusetts—Contd.		
Paper and wood pulp	96.0	87.3
Printing and publishing	103.0	101.9
Rubber footwear	95.9	73.2
Rubber goods, tires, and tubes	82.2	56.5
Silk goods	82.7	58.0
Textile machinery and parts	84.3	56.8
Woolen and worsted goods	80.9	70.0
All industries	88.8	72.8

State, and industry group	Per cent of change, September, 1929, to September, 1930	
	Employment	Pay roll
New York		
Stone, clay, and glass	−16.2	−24.1
Miscellaneous stone and minerals	−22.2	−31.9
Lime, cement, and plaster	−16.4	−14.3
Brick, tile, and pottery	−8.7	−19.0
Glass	−18.1	−27.0
Metals and machinery	−24.2	−28.7
Silver and jewelry	−16.4	−30.0
Brass, copper, and aluminum	−19.1	−29.7
Iron and steel	−35.2	−34.0
Structural and architectural iron	−16.4	−19.8
Sheet metal and hardware	−19.4	−24.0
Firearms, tools, and cutlery	−5.4	−8.1
Cooking, heating, and ventilating apparatus	−23.8	−38.2
Machinery, including electrical apparatus	−27.4	−32.1
Automobiles, carriages, and airplanes	−41.4	−42.8
Railroad equipment and repair	−17.8	−21.9
Boat and ship building	+1.1	−2.4
Instruments and appliances	−14.6	−17.5
Wood manufactures	−18.0	−26.2
Saw and planing mills	−16.3	−20.8
Furniture and cabinet work	−21.4	−32.1
Pianos and other musical instruments	−23.2	−34.1
Miscellaneous wood	−9.1	−9.9
Furs, leather, and rubber goods	−8.2	−18.8
Leather	−4.5	−7.2
Furs and fur goods	+13.5	+15.3
Shoes	−6.4	−23.7
Other leather and canvas goods	−6.4	−8.1

State, and industry group	Per cent of change, September, 1929, to September, 1930	
	Employment	Pay roll
New York—Continued		
Furs, leather and rubber goods—Continued.		
Rubber and gutta percha	−27.6	−32.9
Pearl, horn, bone, etc.	−28.0	−37.0
Chemicals, oils, paints, etc.	−3.9	−4.7
Drugs and chemicals	−9.1	−8.8
Paints and colors	−18.1	−18.7
Oil products	−8.3	−8.6
Miscellaneous chemicals	+7.1	+4.5
Paper	−10.3	−15.6
Printing and paper goods	−5.7	−7.7
Paper boxes and tubes	−7.8	−11.4
Miscellaneous paper goods	−5.4	−6.2
Printing and bookmaking	−5.4	−7.5
Textiles	−20.8	−30.1
Silk and silk goods	−16.2	−22.3
Wool manufactures	−27.9	−42.0
Cotton goods	−27.9	−31.9
Knit goods (excluding silk)	−14.2	−21.2
Other textiles	−16.7	−21.0
Clothing and millinery	−9.6	−10.7
Men's clothing	−10.4	−22.3
Men's furnishings	−22.6	−25.5
Women's clothing	−1.2	+.5
Women's underwear	−15.0	−18.2
Women's headwear	−5.6	−1.6
Miscellaneous sewing	−13.2	−17.8
Laundering and cleaning	−4.0	−3.9
Food and tobacco	−5.3	−9.2
Flour, feed, and cereals	−10.9	−13.9
Canning and preserving	+37.6	+34.0
Other groceries	−14.7	−13.8
Meat and dairy products	−10.4	−11.4
Bakery products	−11.4	−10.4
Candy	−13.5	−18.1
Beverages	−.8	+1.9
Tobacco	−33.3	−39.8
Water, light, and power	+.7	+3.4
All industries	−15.4	−19.9
Oklahoma		
Cottonseed-oil mills	−44.2	−57.6
Food production:		
Bakeries	+17.0	+14.5
Confections	+35.3	+48.7
Creameries and dairies	+52.9	+45.7
Flour mills	−9.0	+2.5
Ice and ice cream	−14.4	−10.5
Meat and poultry	−5.2	−13.2
Lead and zinc:		
Mines and mills	−35.4	−35.2
Smelters	−27.2	−19.6
Metals and machinery:		
Auto repairs, etc.	−15.8	−31.1
Machine shops and foundries	−24.0	−36.1
Tank construction and erection	+38.9	+34.1

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period—Continued

State, and industry group	Per cent of change, September, 1929, to September, 1930	
	Employment	Pay roll
Oklahoma—Continued		
Oil industry:		
Producing and gasoline manufacture	−16.5	−13.4
Refineries	+14.5	+24.2
Printing: Job work	+3.6	+4.0
Public utilities:		
Steam railway shops	−10.6	−13.4
Street railways	−10.0	−6.3
Water, light, and power	+1.9	+9.3
Stone, clay, and glass:		
Brick and tile	−47.9	−47.2
Cement and plaster	−5.5	−14.0
Crushed stone	+7.4	+9.2
Glass manufacture	−35.2	−32.4
Textiles and cleaning:		
Textile manufacture	−6.0	−13.1
Laundries, etc	−3.6	+5.9
Woodwork:		
Sawmills	−28.2	−26.7
Millwork, etc	−21.1	−41.5
All industries	−8.3	−7.0

State, and industry group	Index numbers (1923–1925=100)—employment	
	September, 1929	September, 1930
Pennsylvania		
Metal products	103.9	86.7
Transportation equipment	80.3	[1] 69.8
Textile products	107.6	91.2
Foods and tobacco	109.0	109.8
Stone, clay, and glass products	88.8	66.2
Lumber products	100.7	75.7
Chemical products	98.5	91.7
Leather and rubber products	103.6	100.3
Paper and printing	100.9	97.3
All manufacturing	101.7	88.8
	Pay roll	
Metal products	106.8	80.5
Transportation equipment	83.1	[1] 59.6
Textile products	112.1	83.0
Foods and tobacco	107.9	104.3
Stone, clay, and glass products	83.5	55.7
Lumber products	103.5	70.7
Chemical products	102.5	94.3
Leather and rubber products	106.5	104.2
Paper and printing	114.0	102.6
All manufacturing	104.1	82.4

[1] Preliminary figures.

WHOLESALE AND RETAIL PRICES

Retail Prices of Food in the United States

THE following tables are compiled from simple averages of the actual selling prices [1] received monthly by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food September 15, 1929, and August 15 and September 15, 1930, as well as the percentage changes in the year and in the month. For example, the retail price per dozen of strictly fresh eggs was 53.0 cents on September 15, 1929; 38.8 cents on August 15, 1930; and 43.1 cents on September 15, 1930. These figures show a decrease of 19 per cent in the year and an increase of 11 per cent in the month.

The cost of various articles of food combined shows a decrease of 9.4 per cent September 15, 1930, as compared with September 15, 1929, and an increase of 1.3 per cent September 15, 1930, as compared with August 15, 1930.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE SEPTEMBER 15, 1930, COMPARED WITH AUGUST 15, 1930, AND SEPTEMBER 15, 1929

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) Sept. 15, 1930, compared with—	
		Sept. 15, 1929	Aug. 15, 1930	Sept. 15, 1930	Sept. 15, 1929	Aug. 15, 1930
Sirloin steak	Pound	51.5	44.6	45.0	−13	+1
Round steak	do	46.1	39.4	39.7	−14	+1
Rib roast	do	37.5	32.3	33.0	−12	+2
Chuck roast	do	30.7	24.9	25.6	−17	+3
Plate beef	do	21.2	16.8	17.2	−19	+2
Pork chops	do	40.7	36.7	39.1	−4	+7
Bacon, sliced	do	44.4	42.0	42.7	−4	+2
Ham, sliced	do	56.4	53.3	53.4	−5	+0.2
Lamb, leg of	do	39.5	33.7	34.0	−14	+1
Hens	do	39.2	33.8	33.9	−14	+0.3
Salmon, red, canned	do	31.8	32.6	33.4	+5	+2
Milk, fresh	Quart	14.3	14.0	14.0	−2	0
Milk, evaporated	16-oz. can	10.7	10.0	10.0	−7	0
Butter	Pound	54.8	47.4	48.7	−11	+3
Oleomargarine (all butter substitutes)	do	27.1	25.4	25.1	−7	−1
Cheese	do	38.0	33.9	34.2	−10	+1
Lard	do	18.5	16.5	17.5	−5	+6
Vegetable lard substitute	do	24.7	24.2	24.2	−2	0
Eggs, strictly fresh	Dozen	53.0	38.8	43.1	−19	+11
Bread	Pound	9.0	8.7	8.7	−3	0

[1] In addition to monthly retail prices of food and coal, the bureau publishes periodically the prices of gas and electricity for household use in each of 51 cities. At present this information is being collected in June and December of each year.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE SEPTEMBER 15, 1930, COMPARED WITH AUGUST 15, 1930, AND SEPTEMBER 15, 1929—Continued

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) Sept. 15, 1930, compared with—	
		Sept. 15, 1929	Aug. 15, 1930	Sept. 15, 1930	Sept. 15, 1929	Aug. 15, 1930
Flour	Pound	5.3	4.5	4.4	−17	−2
Corn meal	do	5.3	5.3	5.3	0	0
Rolled oats	do	8.9	8.7	8.7	−2	0
Corn flakes	8-oz. package	9.5	9.4	9.4	−1	0
Wheat cereal	28-oz. package	25.5	25.4	25.4	−0.4	0
Macaroni	Pound	19.6	19.2	19.2	−2	0
Rice	do	9.7	9.5	9.6	−1	+1
Beans, navy	do	14.5	11.5	11.7	−19	+2
Potatoes	do	3.9	3.1	3.2	−18	+3
Onions	do	5.7	5.2	4.7	−18	−10
Cabbage	do	5.1	4.3	3.9	−24	−9
Pork and beans	No. 2 can	11.8	10.9	10.9	−8	0
Corn, canned	do	15.8	15.3	15.3	−3	0
Peas, canned	do	16.6	16.1	16.1	−3	0
Tomatoes, canned	do	12.9	12.4	12.3	−5	−1
Sugar	Pound	6.7	6.1	5.9	−12	−3
Tea	do	77.6	77.4	77.3	−0.4	−0.1
Coffee	do	49.2	40.1	39.6	−20	−1
Prunes	do	15.9	16.1	15.5	−3	−4
Raisins	do	12.0	11.9	11.9	−1	0
Bananas	Dozen	32.1	29.9	29.7	−7	−1
Oranges	do	44.2	63.7	63.3	+43	−1
Weighted food index					−9.4	+1.3

Table 2 shows for the United States average retail prices of specified food articles on September 15, 1913, and on September 15 of each year from 1924 to 1930, together with percentage changes in September of each of these specified years compared with September, 1913. For example, the retail price per pound of flour was 3.3 cents in September, 1913; 5.1 cents in September, 1924; 6.1 cents in September, 1925; 5.8 cents in September, 1926; 5.5 cents in September, 1927; 5.3 cents in September, 1928 and 1929; and 4.4 cents in September, 1930.

As compared with September, 1913, these figures show increases of 55 per cent in September, 1924; 85 per cent in September, 1925; 76 per cent in September, 1926; 67 per cent in September, 1927; 61 per cent in September, 1928 and 1929; and 33 per cent in September 15, 1930.

The cost of the various articles of food combined showed an increase of 42.1 per cent in September, 1930, as compared with September, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE SEPTEMBER 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH SEPTEMBER 15, 1913

[Percentage changes of five tenths of 1 per cent and over are given in whole numbers]

Article	Average retail prices on Sept. 15—								Per cent of increase Sept. 15 of each specified year compared with Sept. 15, 1913						
	1913	1924	1925	1926	1927	1928	1929	1930	1924	1925	1926	1927	1928	1929	1930
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*							
Sirloin steak...pound..	26.3	40.2	41.6	41.9	43.8	51.8	51.5	45.0	53	58	59	67	97	96	71
Round steak....do....	23.2	34.3	35.6	36.4	38.1	45.8	46.1	39.7	48	53	57	64	97	99	71
Rib roast.....do....	20.1	29.0	30.1	30.6	31.8	37.4	37.5	33.0	44	50	52	58	86	87	64
Chuck roast....do....	16.4	20.9	22.0	22.7	24.0	30.4	30.7	25.6	27	34	38	46	85	87	56
Plate beef.....do....	12.3	13.2	13.9	14.5	15.5	20.6	21.2	17.2	7	13	18	26	67	72	40
Pork chops.....do....	22.8	35.8	40.4	42.5	40.7	44.3	40.7	39.1	57	77	86	79	94	79	71
Bacon, sliced....do....	28.1	39.3	49.4	51.9	46.5	45.4	44.4	42.7	40	76	85	65	62	58	52
Ham, sliced.....do....	28.1	46.9	54.9	60.4	53.8	56.0	56.4	53.4	67	95	115	91	99	101	90
Lamb, leg of.....do....	18.7	36.8	38.5	39.1	38.5	40.3	39.5	34.0	97	106	109	106	116	111	82
Hens.....do....	21.5	35.3	36.6	37.8	35.4	37.9	39.2	33.9	64	70	76	65	76	82	58
Salmon, red, canned ...pound..	.....	31.3	34.1	37.2	33.9	33.3	31.8	33.4	.....	.....	.....	.....	.....	.....	.....
Milk, fresh.....quart..	8.9	13.9	14.2	14.0	14.1	14.2	14.3	14.0	56	60	57	58	60	61	57
Milk, evaporated ...16-ounce can..	.....	11.1	11.5	11.5	11.6	11.3	10.7	10.0	.....	.....	.....	.....	.....	.....	.....
Butter.....pound..	37.7	48.5	55.8	52.5	53.4	57.6	54.8	48.7	29	48	39	42	53	45	29
Oleomargarine (all butter substitutes) ...pound..	.....	29.8	30.6	30.2	27.8	27.4	27.1	25.1	.....	.....	.....	.....	.....	.....	.....
Cheese.....do....	22.1	34.6	37.0	36.1	37.7	38.7	38.0	34.2	57	67	63	71	75	72	55
Lard.....do....	16.1	20.0	24.0	22.3	19.2	19.3	18.5	17.5	24	49	39	19	20	15	9
Vegetable lard substitute.....pound..	.....	25.5	25.9	25.9	25.1	24.9	24.7	24.2	.....	.....	.....	.....	.....	.....	.....
Eggs, strictly fresh ...dozen..	37.7	51.9	51.9	51.5	48.7	50.4	53.0	43.1	38	38	37	29	34	41	14
Bread.....pound..	5.6	8.8	9.4	9.4	9.3	9.1	9.0	8.7	57	68	68	66	63	61	55
Flour.....do....	3.3	5.1	6.1	5.8	5.5	5.3	5.3	4.4	55	85	76	67	61	61	33
Corn meal.....do....	3.1	4.8	5.4	5.1	5.2	5.3	5.3	5.3	55	74	65	68	71	71	71
Rolled oats.....do....	.....	8.9	9.2	9.1	9.0	9.0	8.9	8.7	.....	.....	.....	.....	.....	.....	.....
Corn flakes ...8-ounce package..	.....	10.1	11.0	10.9	9.7	9.5	9.5	9.4	.....	.....	.....	.....	.....	.....	.....
Wheat cereal ...28-ounce package..	.....	24.2	24.8	25.4	25.5	25.6	25.5	25.4	.....	.....	.....	.....	.....	.....	.....
Macaroni.....pound..	.....	19.6	20.4	20.2	20.1	19.8	19.6	19.2	.....	.....	.....	.....	.....	.....	.....
Rice.....do....	8.7	10.3	11.3	11.7	10.6	10.0	9.7	9.6	18	30	34	22	15	11	10
Beans, navy.....do....	.....	9.9	10.2	9.1	9.6	12.7	14.5	11.7	.....	.....	.....	.....	.....	.....	.....
Potatoes.....do....	1.9	2.6	3.6	3.9	3.2	2.2	3.9	3.2	37	89	105	68	16	105	68
Onions.....do....	.....	5.8	6.4	5.3	5.5	5.8	5.7	4.7	.....	.....	.....	.....	.....	.....	.....
Cabbage.....do....	.....	4.2	4.7	4.2	4.1	4.2	5.1	3.9	.....	.....	.....	.....	.....	.....	.....
Pork and beans .....No. 2 can..	.....	12.6	12.4	11.7	11.4	11.6	11.8	10.9	.....	.....	.....	.....	.....	.....	.....
Corn, canned....do....	.....	16.0	18.1	16.4	15.6	15.9	15.8	15.3	.....	.....	.....	.....	.....	.....	.....
Peas, canned....do....	.....	18.2	18.4	17.4	16.7	16.8	16.6	16.1	.....	.....	.....	.....	.....	.....	.....
Tomatoes, canned .....No. 2 can..	.....	13.4	13.5	11.8	11.9	11.6	12.9	12.3	.....	.....	.....	.....	.....	.....	.....
Sugar, granulated ...pound..	5.7	8.6	7.0	7.0	7.2	7.0	6.7	5.9	51	23	23	26	25	18	4
Tea.....do....	54.5	71.0	75.8	77.0	77.2	77.4	77.6	77.3	30	39	41	42	42	42	42
Coffee.....do....	29.8	44.3	51.0	51.0	47.3	49.5	49.2	39.6	49	71	71	59	66	65	33
Prunes.....do....	.....	17.4	17.3	17.1	15.2	13.8	15.9	15.5	.....	.....	.....	.....	.....	.....	.....
Raisins.....do....	.....	15.2	14.4	14.8	14.3	13.0	12.0	11.9	.....	.....	.....	.....	.....	.....	.....
Bananas.....dozen..	.....	35.2	34.6	34.4	33.5	32.7	32.1	29.7	.....	.....	.....	.....	.....	.....	.....
Oranges.....do....	.....	48.8	61.0	50.7	55.3	66.1	44.2	63.3	.....	.....	.....	.....	.....	.....	.....
All articles combined [1]	.....	.....	.....	.....	.....	.....	.....	.....	43.3	55.2	54.7	50.3	53.8	57.0	42.1

[1] Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years, from 1913 to 1929, and by months for 1928, 1929, and 1930. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913 TO SEPTEMBER, 1930

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year	100.0	100.0	100.0	1929: Average for year	164.1	188.4	148.6
1914: Average for year	106.7	103.4	97.1	January	164.1	180.9	151.9
1915: Average for year	121.6	99.6	96.1	February	164.1	180.3	152.6
1916: Average for year	126.8	108.2	103.2	March	164.1	182.8	152.4
1917: Average for year	186.5	137.0	127.6	April	164.1	187.5	148.9
1918: Average for year	194.3	172.8	153.4	May	163.5	191.2	147.5
1919: Average for year	198.0	184.2	176.6	June	163.0	192.4	146.8
1920: Average for year	232.1	185.7	185.1	July	163.5	195.9	146.8
1921: Average for year	179.8	158.1	149.5	August	164.7	196.0	147.1
1922: Average for year	159.3	150.3	135.9	September	165.2	194.2	148.1
1923: Average for year	156.9	149.0	147.6	October	163.5	189.2	149.3
1924: Average for year	160.4	150.2	142.8	November	163.6	184.1	147.0
1925: Average for year	176.2	163.0	147.1	December	162.9	181.8	144.9
1926: Average for year	175.5	171.3	145.5	1930:			
1927: Average for year	170.7	169.9	148.7	January	162.9	183.6	138.9
1928: Average for year	167.2	179.2	150.0	February	161.6	183.1	138.5
January	168.0	168.3	152.2	March	160.9	183.0	137.6
February	168.0	167.8	150.7	April	160.3	183.3	138.9
March	166.8	167.1	150.7	May	159.8	181.5	137.0
April	167.2	170.3	147.8	June	160.1	179.9	133.7
May	168.3	175.4	147.3	July	158.6	175.2	133.3
June	169.8	177.7	146.1	August	156.9	169.9	137.4
July	169.3	184.4	147.1	September	156.4	173.2	138.8
August	168.2	189.5	148.3				
September	166.7	195.8	151.2				
October	165.9	188.9	151.1				
November	165.3	184.9	152.5				
December	164.2	179.1	153.5				

Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1929,[2] by months for 1929 and for January through September, 1930. These index numbers, or relative prices, are based on the year 1913 as 100, and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1929 was 196.9, which means that the average money price for the year 1929 was 96.9 per cent higher than the average money price for the year 1913. As compared with the relative price, 188.2 in 1928, the figures for 1929 show an increase of 8.7 points, but an increase of 4.6 per cent in the year.

In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the

[2] For index numbers of each month, January, 1913, to December, 1928, see Bulletin No. 396, pp. 44 to 61; and Bulletin No. 495, pp. 32 to 45.

average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100 are 143.7 for August, 1930, and 145.6 for September, 1930.

The curve shown in the chart on this page pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

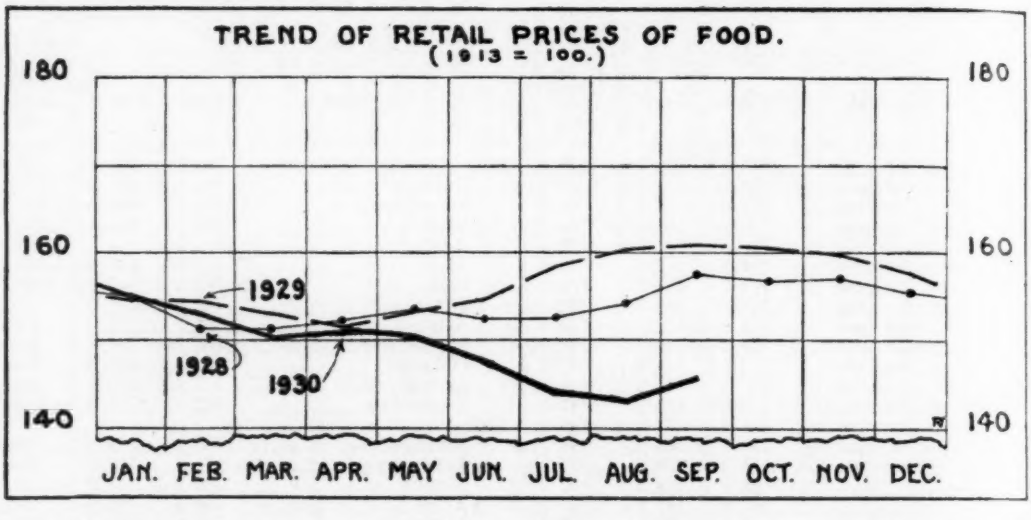


TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1929, AND BY MONTHS FOR 1929 AND 1930

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate chops	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1928	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2
1929	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	186.4	160.7	143.9	171.9
1929: January	190.6	191.0	180.8	181.3	170.2	153.8	159.3	200.0	184.0	160.7	150.7	173.8
February	188.2	188.8	178.8	179.4	167.8	157.1	158.2	199.6	186.4	160.7	152.7	172.9
March	188.6	189.2	179.3	180.0	167.8	167.6	158.9	201.9	190.1	160.7	152.5	172.9
April	192.9	194.6	183.8	184.4	170.2	176.7	160.4	203.3	196.2	159.6	145.7	172.4
May	198.4	201.3	187.9	190.0	174.4	179.5	160.7	204.8	198.1	159.6	142.3	171.9
June	201.6	205.4	189.9	191.9	176.0	179.0	162.2	205.6	193.9	159.6	140.5	171.9
July	206.7	210.8	192.9	195.6	177.7	188.1	164.1	209.7	187.3	160.7	139.4	171.5
August	206.3	210.8	191.9	194.4	176.0	192.4	165.6	211.2	185.0	160.7	140.5	171.0
September	202.8	206.7	189.4	191.9	175.2	193.8	164.4	209.7	184.0	160.7	143.1	171.9
October	198.0	199.6	186.9	187.5	173.6	185.2	161.9	204.8	180.3	161.8	145.4	171.5
November	194.1	196.4	183.3	183.8	171.1	170.5	159.3	200.4	177.0	161.8	139.7	171.0
December	192.5	194.6	181.8	183.1	170.2	163.3	157.4	198.5	174.2	161.8	134.7	170.6
1930: January	192.9	195.5	183.3	184.4	172.7	168.1	157.0	199.3	178.4	159.6	121.9	169.2
February	191.3	194.2	181.8	184.4	171.9	167.6	157.8	200.7	179.3	158.4	122.7	167.0
March	190.6	192.8	181.3	182.5	170.2	171.9	157.8	201.1	179.8	157.3	121.9	164.7
April	190.2	193.3	181.3	182.5	168.6	176.7	157.4	200.4	179.3	157.3	125.6	162.9
May	190.2	192.8	179.8	179.4	164.5	171.9	156.7	200.7	176.6	157.3	120.9	162.0
June	188.6	191.5	177.3	175.6	160.3	174.3	156.7	200.7	167.6	157.3	113.1	157.9
July	182.3	184.3	171.7	166.3	149.6	173.8	156.7	200.0	161.5	157.3	114.1	155.2
August	175.6	176.7	163.1	155.6	138.8	174.8	155.6	198.1	158.7	157.3	123.8	153.4
September	177.2	178.0	166.7	160.0	142.1	186.2	158.1	198.5	159.2	157.3	127.2	154.8

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1929, AND BY MONTHS FOR 1929 AND 1930—Continued

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles [1]
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	120.3	133.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1929: January	117.1	146.7	160.7	154.5	176.7	112.6	135.3	121.8	142.5	166.1	154.6
February	116.5	142.3	160.7	154.5	176.7	112.6	135.3	120.0	142.6	166.1	154.4
March	116.5	122.0	160.7	154.5	176.7	112.6	135.3	118.2	142.6	166.4	153.0
April	117.1	106.4	160.7	154.5	176.7	112.6	135.3	116.4	142.6	166.4	151.6
May	116.5	112.2	160.7	151.5	176.7	111.5	158.8	116.4	142.6	166.1	153.3
June	115.8	120.0	160.7	148.5	176.7	111.5	182.4	116.4	142.5	165.8	154.8
July	115.8	127.8	160.7	151.5	176.7	111.5	229.4	116.4	142.3	165.8	158.5
August	116.5	140.0	160.7	157.6	176.7	112.6	235.3	120.0	142.5	165.4	160.2
September	117.1	153.6	160.7	160.6	176.7	111.5	229.4	121.8	142.6	165.1	160.8
October	115.8	168.1	158.9	157.6	176.7	111.5	223.5	121.8	142.6	164.8	160.5
November	113.9	183.5	158.9	157.6	176.7	111.5	223.5	121.8	142.3	162.1	159.7
December	111.4	182.0	158.9	154.5	180.0	110.3	223.5	120.0	142.8	155.4	158.0
1930: January	108.9	160.6	158.9	154.5	180.0	110.3	229.4	120.0	143.4	147.0	155.4
February	108.2	136.8	157.1	154.5	176.7	110.3	229.4	118.2	143.2	143.3	153.0
March	107.0	102.3	157.1	151.5	176.7	109.2	229.4	116.4	142.8	140.6	150.1
April	106.3	100.0	157.1	148.5	176.7	110.3	241 2	114.5	142.5	138.9	151.2
May	105.7	97.7	157.1	145.5	176.7	109.2	252.9	114.5	142.5	137.2	150.1
June	105.1	97.4	157.1	145.5	176.7	109.2	247.1	110.9	143.0	136.2	147.9
July	103.2	101.7	157.1	139.4	176.7	109.2	194.1	110.9	142.6	135.6	144.0
August	104.4	112.5	155.4	136.4	176.7	109.2	182.4	110.9	142.3	134.6	143.7
September	110.8	124.9	155.4	133.3	176.7	110.3	188.2	107.3	142.1	132.9	145.6

[1] 22 articles in 1913-1920; 42 articles in 1921-1930.

Comparison of Retail Food Costs in 51 Cities

TABLE 5 shows for 39 cities the percentage of increase or decrease in the retail cost of food [3] in September, 1930, compared with the average cost in the year 1913, in September, 1929, and August, 1930. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.[4]

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of September, 99.0 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 40 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Birmingham, Boston, Bridgeport, Buffalo, Butte, Chicago, Cincinnati, Columbus, Dallas, Detroit, Fall River, Houston, Indianapolis, Little Rock, Los Angeles, Louisville,

[3] For list of articles see note 1, p. 230.

[4] The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month, beginning with January, 1921, are given in the Labor Review for March, 1921, p. 26.

Manchester, Memphis, Milwaukee, Newark, New Haven, New York, Norfolk, Omaha, Peoria, Pittsburgh, Portland (Me.), Portland (Oreg.), Providence, Richmond, Rochester, St. Louis, St. Paul, Salt Lake City, San Francisco, Savannah, Scranton, and Springfield (Ill.).

TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN SEPTEMBER, 1930, COMPARED WITH THE COST IN AUGUST, 1930, SEPTEMBER, 1929, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

City	Percentage increase September, 1930, compared with 1913	Percentage decrease September, 1930, compared with September, 1929	Percentage increase September, 1930, compared with August, 1930	City	Percentage increase September, 1930, compared with 1913	Percentage decrease September, 1930, compared with September, 1929	Percentage increase September, 1930, compared with August, 1930
Atlanta	46.0	11.0	1.4	Minneapolis	46.5	9.3	2.4
Baltimore	49.5	9.9	1.7	Mobile		7.4	1.0
Birmingham	49.8	7.6	.5	Newark	41.2	9.1	1.5
Boston	48.8	8.0	1.0	New Haven	47.5	10.6	1.5
Bridgeport		9.3	2.9	New Orleans	45.1	9.1	1.4
Buffalo	49.7	9.9	1.4	New York	49.8	8.7	2.0
Butte		12.3	[1] 1.2	Norfolk		10.9	1.7
Charleston, S. C.	50.3	7.4	[1] 1.4	Omaha	39.7	8.6	2.5
Chicago	58.1	7.6	2.2	Peoria		9.0	1.4
Cincinnati	54.5	6.7	1.1	Philadelphia	47.1	10.4	2.6
Cleveland	42.7	10.6	.8	Pittsburgh	48.8	9.0	1.9
Columbus		7.9	2.1	Portland, Me.		9.7	.7
Dallas	42.7	10.7	.5	Portland, Oreg.	28.8	12.1	.5
Denver	30.8	8.0	2.4	Providence	48.1	9.8	1.9
Detroit	48.7	12.2	1.3	Richmond	50.9	9.2	.6
Fall River	42.3	11.1	1.0	Rochester		9.6	2.2
Houston		8.7	1.0	St. Louis	49.2	9.6	1.8
Indianapolis	45.3	9.6	2.4	St. Paul		9.8	1.9
Jacksonville	38.9	7.2	1.4	Salt Lake City	25.2	10.0	.9
Kansas City	41.1	11.4	1.9	San Francisco	44.8	8.0	1.6
Little Rock	40.7	9.6	[1] 1.2	Savannah		9.5	.4
Los Angeles	32.6	12.3	1.3	Scranton	52.0	10.5	.3
Louisville	43.4	9.8	.8	Seattle	35.8	11.0	1.2
Manchester	44.1	9.2	1.1	Springfield, Ill.		8.3	2.3
Memphis	39.4	9.1	.1	Washington	54.5	9.5	[1] .3
Milwaukee	47.6	10.2	[1] 1.8				

[1] Decrease.

Retail Prices of Coal in the United States [1]

THE following table shows the average retail prices of coal on September 15, 1929, and August 15 and September 15, 1930, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON SEPTEMBER 15, 1929, AND AUGUST 15 AND SEPTEMBER 15, 1930

City, and kind of coal	1929	1930	
	Sept. 15	Aug. 15	Sept. 15
United States:			
Pennsylvania anthracite—			
Stove—			
Average price	$15.21	$14.88	$15.08
Index (1913=100)	196.8	192.6	195.2
Chestnut—			
Average price	$14.87	$14.57	$14.80
Index (1913=100)	187.9	184.1	187.0
Bituminous—			
Average price	$8.87	$8.70	$8.78
Index (1913=100)	163.2	160.1	161.7
Atlanta, Ga.:			
Bituminous, prepared sizes	$7.78	$7.27	$7.50
Baltimore, Md.:			
Pennsylvania anthracite—			
Stove	14.25	14.00	14.25
Chestnut	13.75	13.50	13.75
Bituminous, run of mine—			
High volatile	7.88	7.71	7.96
Birmingham, Ala.:			
Bituminous, prepared sizes	7.39	7.00	7.26
Boston, Mass.:			
Pennsylvania anthracite—			
Stove	15.95	15.75	16.25
Chestnut	15.45	15.25	15.75
Bridgeport, Conn.:			
Pennsylvania anthracite—			
Stove	15.25	14.50	14.50
Chestnut	15.25	14.50	14.50
Buffalo, N. Y.:			
Pennsylvania anthracite—			
Stove	13.51	13.42	13.67
Chestnut	13.01	12.92	13.17
Butte, Mont.:			
Bituminous, prepared sizes	11.14	10.94	10.40
Charleston, S. C.:			
Bituminous, prepared sizes	9.67	9.67	9.67
Chicago, Ill.:			
Pennsylvania anthracite—			
Stove	16.63	16.38	16.38
Chestnut	16.18	15.93	16.21
Bituminous—			
Prepared sizes—			
High volatile	8.22	8.06	8.08
Low volatile	11.10	10.64	11.89
Run of mine—			
Low volatile	8.00	7.75	7.75
Cincinnati, Ohio:			
Bituminous—			
Prepared sizes—			
High volatile	$5.95	$6.05	$6.15
Low volatile	7.88	8.03	8.23
Cleveland, Ohio:			
Pennsylvania anthracite—			
Stove	15.19	14.56	14.44
Chestnut	14.75	14.25	14.13
Bituminous—			
Prepared sizes—			
High volatile	7.03	6.83	6.89
Low volatile	9.64	9.43	9.61
Columbus, Ohio:			
Bituminous—			
Prepared sizes—			
High volatile	6.21	5.82	5.98
Low volatile	7.81	7.19	7.56
Dallas, Tex.:			
Arkansas anthracite—Egg	14.75	14.75	15.00
Bituminous, prepared sizes	12.67	12.17	12.58
Denver, Colo.:			
Colorado anthracite—			
Furnace, 1 and 2 mixed	14.75	15.13	15.25
Stove, 3 and 5 mixed	14.75	15.13	15.25
Bituminous, prepared sizes	10.31	10.18	10.29
Detroit, Mich.:			
Pennsylvania anthracite—			
Stove	16.00	14.44	15.00
Chestnut	15.50	14.31	15.00
Bituminous—			
Prepared sizes—			
High volatile	8.39	8.18	8.18
Low volatile	10.20	9.46	9.77
Run of mine—			
Low volatile	8.00	7.67	7.83
Fall River, Mass.:			
Pennsylvania anthracite—			
Stove	16.50	16.00	16.50
Chestnut	16.25	15.75	16.25
Houston, Tex.:			
Bituminous, prepared sizes	12.20	11.60	11.60
Indianapolis, Ind.:			
Bituminous—			
Prepared sizes—			
High volatile	6.08	5.92	5.89
Low volatile	8.32	8.38	8.38
Run of mine—			
Low volatile	6.92	7.05	7.00

[1] Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON SEPTEMBER 15, 1929, AND AUGUST 15 AND SEPTEMBER 15, 1930—Continued

City, and kind of coal	1929	1930	
	Sept. 15	Aug. 15	Sept. 15
Jacksonville, Fla:			
Bituminous, prepared sizes	$12.00	$11.00	$10.00
Kansas City, Mo.:			
Arkansas anthracite—			
Furnace	12.45	12.17	12.42
Stove No. 4	13.42	12.88	13.25
Bituminous, prepared sizes	7.20	7.00	7.06
Little Rock, Ark.:			
Arkansas anthracite—Egg	12.75	13.00	12.50
Bituminous, prepared sizes	9.35	9.10	9.20
Los Angeles, Calif.:			
Bituminous, prepared sizes	16.50	16.00	16.25
Louisville, Ky.:			
Bituminous—			
Prepared sizes—			
High volatile	6.66	6.21	6.19
Low volatile	9.00	8.50	8.75
Manchester, N. H.:			
Pennsylvania anthracite—			
Stove	17.00	16.42	16.83
Chestnut	17.00	16.42	16.83
Memphis, Tenn.:			
Bituminous, prepared sizes	7.41	7.82	7.85
Milwaukee, Wis.:			
Pennsylvania anthracite—			
Stove	16.20	15.75	15.75
Chestnut	15.75	15.30	15.36
Bituminous—			
Prepared sizes—			
High volatile	7.68	7.75	7.68
Low volatile	10.88	10.53	10.46
Minneapolis, Minn.:			
Pennsylvania anthracite—			
Stove	18.20	17.15	17.26
Chestnut	17.75	16.70	16.99
Bituminous—			
Prepared sizes—			
High volatile	10.53	9.99	10.17
Low volatile	13.65	12.89	12.89
Mobile, Ala.:			
Bituminous, prepared sizes	9.15	8.82	8.88
Newark, N. J.:			
Pennsylvania anthracite—			
Stove	13.89	13.77	13.90
Chestnut	13.39	13.27	13.40
New Haven, Conn.:			
Pennsylvania anthracite—			
Stove	14.85	14.65	14.90
Chestnut	14.85	14.65	14.90
New Orleans, La.:			
Bituminous, prepared sizes	9.14	9.11	9.11
New York, N. Y.:			
Pennsylvania anthracite—			
Stove	14.33	13.63	14.04
Chestnut	13.83	13.13	13.56
Norfolk, Va.:			
Pennsylvania anthracite—			
Stove	14.50	14.50	14.50
Chestnut	14.50	14.50	14.50
Bituminous—			
Prepared sizes—			
High volatile	7.81	7.38	7.38
Low volatile	9.50	9.00	9.00
Run of mine—			
Low volatile	7.00	7.00	7.00
Omaha, Nebr.:			
Bituminous, prepared sizes	9.69	9.62	9.52
Peoria, Ill.:			
Bituminous, prepared sizes	6.62	6.28	6.28
Philadelphia, Pa.:			
Pennsylvania anthracite—			
Stove	[3] 15.00	13.42	13.83
Chestnut	[3] 14.50	13.00	13.33
Pittsburgh, Pa.:			
Pennsylvania anthracite—			
Chestnut	$15.00	$14.75	$14.75
Bituminous, prepared sizes	5.11	5.05	4.98
Portland, Me.:			
Pennsylvania anthracite—			
Stove	16.80	16.56	16.80
Chestnut	16.80	16.56	16.80
Portland, Oreg.:			
Bituminous, prepared sizes	12.79	13.12	13.09
Providence, R. I.:			
Pennsylvania anthracite—			
Stove	[1] 16.00	[1] 15.75	[1] 16.00
Chestnut	[1] 16.00	[1] 15.75	[1] 16.00
Richmond, Va.:			
Pennsylvania anthracite—			
Stove	14.00	14.50	15.00
Chestnut	14.00	14.50	15.00
Bituminous—			
Prepared sizes—			
High volatile	7.75	8.25	8.75
Low volatile	8.53	8.37	8.85
Run of mine—			
Low volatile	6.75	6.75	7.25
Rochester, N. Y.:			
Pennsylvania anthracite—			
Stove	14.50	14.60	14.75
Chestnut	14.00	14.10	14.25
St. Louis, Mo.:			
Pennsylvania anthractie—			
Stove	16.65	16.25	16.25
Chestnut	16.40	16.00	16.00
Bituminous, prepared sizes	6.70	6.14	6.34
St. Paul, Minn.:			
Pennsylvania anthracite—			
Stove	18.20	17.60	17.60
Chestnut	17.75	17.15	17.15
Bituminous—			
Prepared sizes—			
High volatile	10.28	10.23	10.25
Low volatile	13.65	13.25	13.25
Salt Lake City, Utah:			
Colorado anthracite—			
Furnace, 1 and 2 mixed	18.00	.....	.....
Stove, 3 and 5 mixed	18.00	.....	.....
Bituminous, prepared sizes	7.96	8.40	8.40
San Francisco, Calif.:			
New Mexico anthracite—			
Cerillos egg	26.00	25.00	26.00
Colorado anthracite—			
Egg	25.50	24.50	25.00
Bituminous, prepared sizes	17.13	15.75	17.00
Savannah, Ga.:			
Bituminous, prepared sizes	[2] 9.74	[2] 9.62	[2] 9.62
Scranton, Pa.:			
Pennsylvania anthracite—			
Stove	10.27	10.07	10.22
Chestnut	9.90	9.70	9.85
Seattle, Wash.:			
Bituminous, prepared sizes	10.65	10.55	10.65
Springfield, Ill.:			
Bituminous, prepared sizes	4.34	4.37	4.34
Washington, D. C.:			
Pennsylvania anthracite—			
Stove	[3] 15.58	[3] 15.48	[3] 15.62
Chestnut	[3] 15.08	[3] 14.98	[3] 15.22
Bituminous—			
Prepared sizes—			
High volatile	[3] 8.63	[3] 8.42	[3] 8.63
Low volatile	[3] 11.42	[3] 11.18	[3] 11.43
Run of mine—			
Mixed	[3] 7.75	[3] 7.81	[3] 7.81

[1] The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

[2] All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

[3] Per ton of 2,240 pounds.

Comparison of Retail-Price Changes in the United States and in Foreign Countries

THE principal index numbers of retail prices published by foreign countries have been brought together with those of this bureau in the subjoined table after having been reduced, in most cases, to a common base, namely, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index number of retail prices compiled by the bureau, because of the fact that in numerous instances satisfactory information for 1913 was not available. Some of the countries shown in the table, now publish index numbers of retail prices on the July, 1914, base. In such cases, therefore, the index numbers are reproduced as published. For other countries the index numbers here shown have been obtained by dividing the index for each month specified in the table by the index for July, 1914, or the nearest period thereto as published in the original sources. As stated in the table, the number of articles included in the index numbers for the different countries differs widely. These results, which are designed merely to show price trends and not actual differences in the several countries, should not, therefore, be considered as closely comparable with one another. In certain instances, also, the figures are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities and the localities included on successive dates.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES

Country	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France (except Paris)	France (Paris)	Germany
Number of localities.	51	60	59	Entire country	100	21	320	1	71
Commodities included	42 foods	29 foods	56 (foods, etc.)	29 foods	Foods	36 foods	13 (11 foods)	13 (11 foods)	Foods
Computing agency	Bureau of Labor Statistics	Department of Labor	Ministry of Industry and Labor	Office of Statistics	Government Statistical Department	Central Bureau of Statistics	Ministry of Labor	Ministry of Labor	Federal Statistical Bureau
Base=100	July, 1914	July, 1914	April, 1914	July, 1914	July, 1914	January–June, 1914	August, 1914	July, 1914	October, 1913–July, 1914
1924									
January	146	145	480	836	194	1089	[1] 401	376	127
April	138	137	498	829	----------	1035	[1] 395	380	123
July	140	134	493	837	200	1052	[1] 401	360	126
October	145	139	513	877	----------	1156	[1] 428	383	134
1925									
January	151	145	521	899	215	1130	[1] 442	408	137
April	148	142	506	901	----------	1137	[1] 435	509	144
July	156	141	509	916	210	1145	[1] 451	421	154
October	158	147	533	875	----------	1165	[1] 471	433	151
1926									
January	161	157	527	854	177	1090	[1] 503	480	143
April	159	153	529	832	----------	1085	[1] 523	503	142
July	154	149	637	876	159	1105	[1] 610	574	145
October	157	147	705	888	----------	1126	[1] 647	624	145
1927									
January	156	153	755	914	156	1092	[1] 586	592	151
April	150	146	774	923	152	1069	[1] 572	580	150
July	150	147	790	962	153	1102	[1] 553	557	157
October	153	148	804	907	152	1156	[1] 526	520	152
1928									
January	152	151	813	913	152	1126	[1] 522	530	152
April	149	146	807	905	152	1119	[1] 530	532	151
July	150	146	811	943	153	1155	[1] 536	[2] 111	154
October	153	152	834	907	146	1183	[1] 562	[2] 115	152
1929									
January	151	152	856	900	147	1156	----------	[2] 122	153
February	151	150	859	911	----------	1141	[2] 117	[2] 122	156
March	150	151	862	913	----------	1135	----------	[2] 123	159
April	148	148	860	901	150	1118	----------	[2] 125	154
May	150	147	864	906	----------	1104	[2] 118	[2] 127	154
June	151	147	867	907	----------	1103	----------	[2] 127	154
July	155	148	874	925	149	1116	----------	[2] 123	156
August	157	157	879	900	----------	1131	[2] 118	[2] 123	155
September	157	157	889	886	----------	1128	----------	[2] 122	154
October	157	157	894	879	146	1137	----------	[2] 124	154
November	156	158	897	880	----------	1123	[2] 120	[2] 125	153
December	155	159	897	880	----------	1090	----------	[2] 125	152
1930									
January	152	160	895	872	145	1048	----------	[2] 124	150
February	150	159	890	865	----------	1022	[2] 118	[2] 121	148
March	147	157	879	853	----------	1006	----------	[2] 120	145
April	148	151	870	851	140	975	----------	[2] 119	143
May	147	151	867	852	----------	945	[2] 116	[2] 120	142
June	145	150	866	865	----------	937	----------	[2] 120	143
July	141	147	869	886	137	969	----------	[2] 122	146
August	141	144	872	857	----------	995	----------	[2] 127	145
September	142								

[1] For succeeding month.

[2] In gold.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES—Continued

Country	Italy	Netherlands (The Hague)	Norway	Sweden	Switzerland	United Kingdom	South Africa	India (Bombay)	Australia	New Zealand
Number of localities	47	1	31	49	33	630	9	1	30	25
Commodities included	20 foods and charcoal	Foods	Foods	50 (43 foods, 7 fuel and light)	Foods	21 foods	24 foods	17 foods	46 foods and groceries	59 foods
Computing agency	Ministry of National Economy	Central Bureau of Statistics	Central Bureau of Statistics	Social Board	Labor Office (revised)	Ministry of Labor	Office of Census and Statistics	Labor Office (revised)	Bureau of Census and Statistics	Census and Statistics Office
Base=100	1913	1921	July, 1914	July, 1914	July, 1914	July, 1919	1914	July, 1914	July, 1914	July, 1914
1924										
January	527	[3] 82.5	230	163	173	175	120	154	155	150
April	527	[3] 81.7	240	159	169	167	122	143	150	150
July	538	[3] 80.8	248	159	170	162	117	151	148	148
October	556	[3] 82.3	264	172	174	172	120	156	146	145
1925										
January	609	[3] 80.2	277	170	172	178	120	151	148	147
April	606	[3] 86.7	276	170	169	170	124	153	152	149
July	605	[3] 81.3	260	169	169	167	120	152	156	151
October	645	[3] 79.3	228	166	168	172	119	148	157	155
1926										
January	658	[3] 76.6	216	162	165	171	116	151	155	154
April	633	[3] 80.1	198	158	161	159	119	150	163	151
July	645	[3] 73.5	198	156	159	161	117	155	159	149
October	662	[3] 75.7	191	157	160	163	120	153	153	147
1927										
January	629	[3] 76.3	180	156	158	167	116	155	158	148
April	606	[3] 77.0	169	151	156	155	119	151	151	145
July	540	[3] 76.5	175	151	157	159	119	154	152	144
October	530	[3] 79.5	173	155	159	161	119	148	150	143
1928										
January	531	[3] 81.6	170	153	159	162	119	151	154	147
April	522	[3] 79.4	171	154	156	155	119	140	154	144
July	516	[3] 76.2	173	157	157	157	116	143	152	147
October	536	[3] 75.5	163	153	158	157	115	142	150	149
1929										
January	565	----------	158	150	157	159	115	146	161	149
February	565	----------	157	151	157	156	115	146	161	148
March	571	76.0	158	152	156	157	117	146	160	146
April	566	----------	156	150	154	150	118	145	162	147
May	563	----------	156	149	154	149	119	143	160	148
June	564	72.3	156	149	155	147	118	144	161	147
July	558	----------	157	151	155	149	116	145	160	146
August	553	----------	161	151	156	153	115	146	161	146
September	547	74.5	160	151	158	154	114	146	162	147
October	546	----------	160	150	158	156	113	147	165	147
November	551	----------	159	148	157	159	112	147	164	147
December	554	73.1	157	147	157	159	112	148	155	147
1930										
January	548	----------	156	145	155	157	112	145	153	146
February	536	----------	154	144	154	154	111	143	151	145
March	525	69.7	152	142	153	150	111	139	151	144
April	522	----------	152	140	152	143	113	138	151	144
May	510	----------	151	140	150	140	113	137	150	144
June	----------	68.8	151	140	151	138	112	137	149	143
July	----------	----------	151	140	152	141	109	136	----------	143
August	----------	----------	151	139	152	144	----------	133	----------	----------
September	----------	----------	----------	----------	----------	144	----------	----------	----------	----------

[3] Second month following.

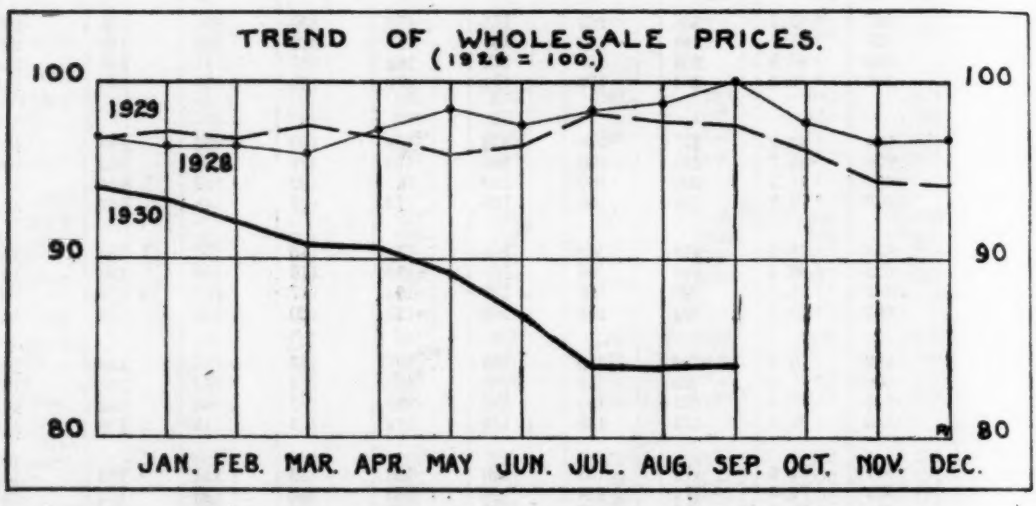
Index Numbers of Wholesale Prices in September, 1930

THE general level of wholesale prices in September varied little from the August level, but tended upward, according to the index number of the Bureau of Labor Statistics of the United States Department of Labor. This index number, which is based on 550 commodities or price series in 1926 as 100.0, stands at 84.2 for September compared with 84.0 for the month before. The purchasing power of the 1926 dollar in September was $1.188.

Prices of farm products showed an average gain of one-half of 1 per cent, large decreases in grains and cotton being more than offset by increases in beef steers, hogs, poultry, eggs, and potatoes. The price level for this group rose from 84.9 in August to 85.3 in September.

Foods as a whole rose appreciably, the net increase being nearly 2½ per cent. Among articles increasing in price were butter, cheese, fresh beef and pork, bacon, coffee, canned beans and corn, fish, and oranges. Wheat and rye flour, on the other hand, averaged lower than in August.

Hides and skins advanced in price, while leather declined and boots and shoes and other leather products were practically stationary.



Textile products showed a perceptible decrease, cotton goods, silk and rayon, woolen and worsted goods, and other textile products all sharing in the decline.

Fuel and lighting materials moved upward, anthracite and bituminous coal, coke, and petroleum products being at higher levels than in August.

Metal products as a whole were downward, iron and steel and nonferrous metals contributing to the lower prices.

Building materials also showed a net loss, prices of lumber, brick, structural steel, and paint materials averaging lower than in the previous month.

Chemicals and drugs, including fertilizer materials and mixed fertilizers, were somewhat cheaper than in August, while a small decrease also took place among house-furnishing goods.

In the group of miscellaneous commodities pronounced price declines were reported for cattle feed and crude rubber, with a smaller decline for paper and wood pulp.

An increase over the August level is shown for the major groups of raw materials and finished products, while semimanufactured articles averaged lower. Nonagricultural commodities as a group were slightly higher, with all commodities exclusive of farm products and foods showing a decrease.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	September, 1929	August, 1930	September, 1930	Purchasing power of the dollar, September, 1930
All commodities	97.5	84.0	84.2	$1.188
Farm products	106.6	84.9	85.3	1.172
Grains	101.6	80.4	77.0	1.299
Livestock and poultry	106.6	84.6	88.0	1.136
Other farm products	108.3	86.7	86.4	1.157
Foods	103.2	87.1	89.2	1.121
Butter, cheese, and milk	106.5	97.9	99.6	1.004
Meats	113.1	93.1	99.2	1.008
Other foods	95.9	79.4	79.3	1.261
Hides and leather products	110.8	98.9	99.1	1.009
Hides and skins	121.3	91.2	94.2	1.062
Leather	112.4	99.9	98.2	1.018
Boots and shoes	106.1	100.6	100.5	.995
Other leather products	106.6	104.9	105.0	.952
Textile products	93.1	77.7	75.5	1.325
Cotton goods	98.9	85.0	82.8	1.208
Silk and rayon	80.3	57.6	55.4	1.805
Woolen and worsted goods	96.2	86.6	84.6	1.182
Other textile products	83.1	63.5	61.3	1.631
Fuel and lighting materials	81.1	75.4	76.3	1.311
Anthracite coal	90.6	87.8	89.1	1.122
Bituminous coal	91.3	88.6	89.2	1.121
Coke	84.4	83.8	83.9	1.192
Gas	94.3	99.8	(1)	
Petroleum products	70.2	60.9	62.0	1.613
Metals and metal products	104.1	92.7	91.8	1.089
Iron and steel	97.6	90.1	89.5	1.117
Nonferrous metals	104.9	72.7	71.2	1.404
Agricultural implements	98.2	94.9	94.9	1.054
Automobiles	110.3	102.5	101.6	.984
Other metal products	98.5	98.4	98.4	1.016
Building materials	97.5	87.4	86.4	1.157
Lumber	95.7	81.1	80.8	1.238
Brick	89.4	82.5	82.3	1.215
Cement	86.0	91.7	91.7	1.091
Structural steel	99.6	84.3	81.7	1.224
Paint materials	99.9	83.7	78.1	1.280
Other building materials	105.4	98.7	98.0	1.020
Chemicals and drugs	93.9	87.3	86.6	1.155
Chemicals	99.9	92.1	90.9	1.100
Drugs and pharmaceuticals	70.3	66.8	66.8	1.497
Fertilizer materials	89.9	83.3	83.1	1.203
Mixed fertilizers	97.8	92.7	92.5	1.081
House-furnishing goods	97.1	95.9	95.4	1.048
Furniture	96.7	96.5	96.5	1.036
Furnishings	97.3	95.3	94.4	1.059
Miscellaneous	81.7	71.2	69.7	1.435
Cattle feed	132.5	104.8	93.6	1.068
Paper and pulp	88.2	83.8	83.5	1.198
Rubber	41.9	20.3	17.1	5.848
Automobile tires	55.3	52.0	52.0	1.923
Other miscellaneous	108.5	94.5	93.8	1.066
Raw materials	98.9	81.8	82.1	1.218
Semimanufactured articles	97.6	78.1	76.5	1.307
Finished products	97.0	86.4	86.8	1.152
Nonagricultural commodities	95.1	83.8	84.0	1.190
All commodities less farm products and foods	92.7	83.3	82.8	1.208

[1] Data not yet available.

COST OF LIVING

New Commission on Cost of Living in Belgium

ACCORDING to Revue du Travail (Brussels), June 30, 1930 (pp. 933, 934), the Belgian Government has appointed a commission to inquire into cost of living. Economists, capital, and labor as well as the Government are represented on the commission. The complete membership is as follows: 4 representatives of the Belgian Labor Party; 2 of the Confederation of Christian Trade-Unions; 1 of the Federation of Liberal Trade-Unions; 3 of the Central Industrial Committee; 11 of the various branches of Government; and 4 professors.

Cost of Living in Uruguay

THE cost of living of the typical Uruguayan worker's family increased three points during the year 1929 or from an index of 120 in 1928 to 123 in 1929, according to an article in La Revista Economica Sudamericana for February, 1930 (p. 44), by Dr. César Charlone, director of the National Labor Bureau, based on studies made by that office. This increase is equal to 2.5 per cent of the annual family budget.

With the exception of those industries in which there were labor disturbances during the year (construction enterprises), the average nominal wages did not suffer any change, and compare with previous years as follows: 1914, 100; 1919, 115; 1923, 146; 1924, 160; and 1929, 160.

The real wages have varied considerably from the nominal wages because of the fluctuation in the purchasing power of the latter. While the index of average nominal wages for 1929 is 160, that of average real wages is only 130.

The following table gives index numbers of the cost of living and of the average nominal and real wages for the 16-year period from 1914 to 1929:

INDEX NUMBERS OF COST OF LIVING AND AVERAGE NOMINAL AND REAL WAGES OF WORKERS IN URUGUAY

Year	Index numbers of—			Year	Index numbers of—		
	Cost of living	Average nominal wages	Average real wages		Cost of living	Average nominal wages	Average real wages
1914	100	100	100	1922	129	146	113
1915	108.4	108	99.6	1923	125	146	118
1916	107.8	108	100.1	1924	123	160	130
1917	110.5	108	98	1925	123.6	160	130
1918	116.6	115	99	1926	123.4	160	130
1919	128	115	89.8	1927	119	160	134.4
1920	149	146	98	1928	120	160	133.3
1921	139	146	105	1929	123	160	130

IMMIGRATION AND EMIGRATION

Statistics of Immigration for August, 1930

By J. J. Kunna, Chief Statistician United States Bureau of Immigration

A TOTAL of 34,540 aliens was admitted to the United States during August, 1930, including 14,816 immigrant and 19,724 nonimmigrant. The exodus of aliens this month totaled 34,411, of whom 29,166, or 84.8 per cent, were nonemigrants going abroad for a short stay or leaving after a visit in this country. The remaining 5,245 were emigrants departing with the intention of making their future home in some foreign country. During the same month 69,957 American citizens returned to the United States and 88,372 left for foreign lands.

Of the 34,540 aliens who entered the country during August, 27,122 came in at the seaports and 22,804, or 84.1 per cent of these landed at New York. Aliens coming in via the northern and southern land borders numbered 6,675 and 743, respectively. During the corresponding month a year ago, 41,875 aliens were admitted, comprising 22,778 immigrant and 19,007 nonimmigrant, of whom 25,759, or 81.9 per cent, entered via New York, 8,461 via the northern land border, and 1,878 via the Mexican border, the remaining 5,687 landed at Boston, San Francisco, and other seaports. Europeans comprised nearly 86 per cent of the New York arrivals, 19,537 aliens admitted at that port during August last being natives of Europe, while 1,938 were born in countries of the Western Hemisphere, principally Canada, the British West Indies, and Cuba; 633 were born in China and other Asiatic countries, and 321 in Africa, Australia, and the Pacific Islands.

About 4 out of every 10 aliens entering at our principal seaport in August last came back to a permanent domicile in the United States, 8,279 of the arrivals at New York having been admitted as returning residents under the immigration act of 1924. Of the other principal classes, 6,818 were admitted under the act as quota immigrants, 5,235 were temporary visitors for business or pleasure or persons passing through the country, and 1,654 came in as husbands, wives, or unmarried children under 21 years of age, of American citizens.

Of the principal classes entering via the Canadian land border, 2,522 came in under the act as natives of nonquota countries, mainly Canada, and 1,235 were quota immigrants, principally natives of Great Britain. About 51 per cent of the Mexican border arrivals were admitted under the act of 1924 as natives of nonquota countries, 385 being of this class, practically all of whom were Mexican immigrants born in Mexico.

Among the 14,816 immigrant aliens admitted during August, 1930, the English race led the list with 2,334, followed by the Irish with 2,035,

while the German contributed 1,930, Italian 1,444, Scotch 1,411, French 905, Hebrew 782, and Scandinavian 618. The other races or peoples contributed less than 400 each.

The statistics for the first two months of the current fiscal year show a decrease of over 25 per cent in immigration from Europe as well as from Canada and Mexico. During July and August, 1930, 16,524 immigrants came from European countries, 7,638 from Canada and 823 from Mexico. In the same months a year ago, 22,601 immigrants were admitted from Europe, 13,078 from Canada, and 3,577 from Mexico.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1, 1929, TO JUNE 30, 1930, AND DURING JULY AND AUGUST, 1930

Period	Inward						Outward					
	Aliens admitted			United States citizens arrived	Total	Aliens debarred from entering [1]	Aliens departed			United States citizens departed	Total	Aliens deported after landing [2]
	Immigrant	Non-immigrant	Total				Emigrant	Non-emigrant	Total			
Fiscal year ended June 30, 1930	241,700	204,514	446,214	477,260	923,474	8,233	50,661	221,764	272,425	462,023	734,448	16,631
1930												
July	13,323	16,466	29,789	38,822	68,611	881	4,818	22,588	27,406	55,366	82,772	1,440
August	14,816	19,724	34,540	69,957	104,497	837	5,245	29,166	34,411	88,372	122,783	1,208

[1] These aliens are not included among arrivals, as they were not permitted to enter the United States.
[2] These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

PUBLICATIONS RELATING TO LABOR

Official—United States

NEW YORK.—Department of Labor. Bureau of Industrial Hygiene. *Accidents in metal stamping and forming plants: Analysis of 300 cases with suggestions as to prevention. New York, 124 East 28th Street, 1930. 60 pp.; diagrams, illus.*

—— —— —— *Hand-tool accidents, their cause and prevention. New York, 124 East 28th Street, 1930. 46 pp.; diagrams, illus.*

TENNESSEE.—Department of Labor. *Seventh annual report, 1929. Nashville, 1929. 305 pp.; map, charts, illus.*

Among the subordinate offices for which information is given in this volume are the division of mines, division of workshop and factory inspection, division of fire prevention, and division of workmen's compensation.

UNITED STATES.—Congress. House of Representatives. Committee on the Judiciary. *Unemployment in the United States. Hearings on S. 3059, 3060, H. R. 8374, 8655, 9560, 11414, 12550, and 12551 (71st Cong., 2d sess.), June 11 and 12, 1930. Washington, 1930. 193 pp.*

Contains programs and suggestions from economic and labor experts for dealing with unemployment.

—— Department of Agriculture. *Circular No. 121: Cooperative marketing and purchasing, 1920–1930, by R. H. Elsworth. Washington, 1930. 56 pp.; maps.*

This report is on a basis different from that of previous studies. It uses as a measure of growth and business the quantities handled by the various types of societies—those handling dairy products, fruits and vegetables, grain, livestock, etc.—instead of the money values, as heretofore, on the ground that "quantities of products handled year by year will much more truly indicate trends in cooperative activity than any other measure available at this time." One section deals with cooperative purchasing by farmers' organizations.

—— —— *Yearbook of agriculture, 1930. Washington, 1930. 1080 pp.; diagrams, illus.*

—— Department of Commerce. Bureau of Foreign and Domestic Commerce. *Commerce yearbook, 1930. Vol. 1.—United States. Washington, 1930. 678 pp.; maps, charts.*

—— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 521: Wholesale prices, 1929. Washington, 1930. 83 pp.*

—— —— Children's Bureau. *Publication No. 196: Youth and crime. Washington, 1930. 205 pp.*

A study of the prevalence and treatment of deliquency among Chicago boys over the juvenile court age. "The report presents statistics on the trend of delinquency of boys of this age from 1915 to 1925 as indicated by reports of the police department, the jail, and the municipal court. Analysis of a selected group of cases dealt with by the boys' court branch of the municipal court, which has jurisdiction over boys 17 to 20 years of age, inclusive, and detailed studies of 82 boys dealt with by this court form the main body of the report.

It is hoped that the material will afford a basis for more intelligent planning for the needs of this age group, which for the most part has not been reached by the constructive forces represented by the juvenile court."

United States.—Treasury Department. Public Health Service. *Public health bulletin No. 181: Studies in illumination. Washington, 1929. 58 pp.; diagrams, illus.*

This study deals with the relationship of illumination to ocular efficiency and ocular fatigue among the letter separators in the Chicago Post Office.

—— —— —— *Public health bulletin No. 186: Effect of repeated daily exposure of several hours to small amounts of automobile exhaust gas, by R. R. Sayers, W. P. Yant, and others. Washington, 1929. 58 pp.; charts, illus.*

The study reports the effects of daily exposure of six men to gasoline engine exhaust gas-air mixtures containing 2, 3, and 4 parts of carbon monoxide per 10,000 parts of air. The study was made for the purpose of determining the effects of such exposures upon traffic officers and maintenance men in vehicular tunnels.

—— —— —— *Public health bulletin No. 195: Review of carbon monoxide poisoning, by R. R. Sayers and Sara J. Davenport. Washington, 1930. 97 pp.*

This bulletin contains an account of the earliest reported cases of carbon-monoxide poisoning and a review of the hazards of poisoning from CO presented by different industries, symptoms caused by different degrees of concentration of the gas, and treatment as determined by various studies and experiments. A bibliography is appended.

—— —— —— *Public health reports supplement No. 83: Public health laws and regulations adopted during 1928. Washington, 1930. 192 pp.*

—— —— —— *Public health reports supplement No. 84: Court decisions relating to public health. Digest of decisions abstracted and published currently in Public Health Reports during period 1926–1929, prepared by William Fowler. Washington, 1930. 134 pp.*

Official—Foreign Countries

Austria.—Zentral-Gewerbe-Inspektorate. *Die Amtstätigkeit der Gewerbe-Inspektorate im Jahre 1928. Vienna, 1929. 256 pp., illus.*

—— —— *Die Amtstätigkeit der Gewerbe-Inspektorate im Jahre 1929. Vienna, 1930. 228 pp.; diagrams, illus.*

These two reports on factory inspection in Austria, in 1928 and 1929, include general reviews of industrial conditions, labor protection, industrial hygiene, legislation, economic conditions of wage earners, measures for prevention of industrial accidents and diseases, welfare work among wage earners, etc.

British Columbia (Canada).—Department of Labor. *Annual report for the year ended December 31, 1929. Victoria, 1930. 79 pp.; charts.*

Among the data in this volume are classified weekly wage rates for various industries.

Burma (India).—[Chief Inspector of Factories.] *Annual report on the working of the Indian factories act, 1911, in Burma, for the year 1929. Rangoon, 1930. 56 pp.*

Canada.—Department of Labor. *Ninth report on organization in industry, commerce, and the professions in Canada, 1930. Ottawa, 1930. 140 pp.*

Includes, so far as such information was supplied, the date of formation, membership, objectives, and names and addresses of the chief executive officers of organizations classified in 19 major groups of activities.

FRANKFORT ON THE MAIN (GERMANY).—Statistisches Amt. *Statistisches Jahresübersichten der Stadt Frankfurt A. Main, ausgabe für das Jahr 1928–29. Frankfort on the Main, 1930. 160 pp.*

Contains statistical information in regard to the city of Frankfort on the Main for the fiscal year 1928–29, including public welfare work, social insurance, employers' and wage earners' organizations, employment service, unemployment and care for the unemployed, vocational guidance, housing, etc.

GERMANY.—Statistisches Reichsamt. *Statistisches Jahrbuch für das Deutsche Reich, 1930. Berlin, 1930. [Various paging.] Maps, charts.*

Contains statistical information in regard to the Republic of Germany, including the subjects of employment, unemployment, wages, consumption, social insurance, public health, welfare work, education, vocational guidance, etc.

GREAT BRITAIN.—Department of Overseas Trade. *Economic conditions in Belgium in 1929, together with an annex on the Grand Duchy of Luxemburg. Report by N. S. Reyntiens, commercial secretary, British Embassy, Brussels. London, 1930. 134 pp.*

In section 7, which deals with social questions, there are brief reports on family allowances, labor shortage, foreign labor, new social legislation, strikes, unemployment, labor exchanges, housing, and cost of living.

—— Home Office. Factory Department. *Annual report for the year 1929. London, 1930. 173 pp. (Cmd. 3633.)*

The report of the senior medical inspector of factories is reviewed in this issue of the Labor Review.

—— Mines Department. Safety in Mines Research Board. *Eighth annual report, 1929. London, 1930. 62 pp.*

Contains a short statement of each study undertaken during 1929, together with a summary of the progress made by the health advisory committee in the study of the effects of dust inhalation, silicosis, etc.

—— Ministry of Health. *Eleventh annual report, 1929–30. London, 1930. 277 pp. (Cmd. 3667.)*

Data on widows', orphans', and old-age pensions from this report are given in this issue of the Review.

—— —— *Report on an investigation regarding the emission of fumes from artificial silk works. London, 1929. 7 pp.*

—— Ministry of Labor. National Advisory Council for Juvenile Employment (England and Wales). *Third report: Provision of courses of instruction for unemployed boys and girls. London, 1930. 18 pp. (Cmd. 3638.)*

—— Permanent Consultative Committee on Official Statistics. *Guide to current official statistics of the United Kingdom. Vol. 8, 1929. London, 1930. 316 pp.*

HAMBURG (GERMANY).—Statistisches Landesamt. *Statistisches Jahrbuch für die Freie und Hansestadt Hamburg 1929/30. Hamburg, 1930. 454 pp.; maps.*

Statistical yearbook for the city of Hamburg, Germany, for the year 1929/30, including data on public health, housing, conditions of civil service, cost of living, union wages, social insurance, employment service, welfare work, public assistance to youth, education, etc.

HUNGARY.—Ministère du Travail et de la Prévoyance Sociale. *L'Oeuvre de protection sociale en Hongrie. Budapest, 1930. 126 pp.*

Contains a review of the activities of the Ministry of Labor and Social Welfare of Hungary, and information on social insurance, child welfare, care for war victims, housing, maternity protection, and work of various welfare associations in Hungary.

ITALY.—Istituto Centrale di Statistica. *Annuario statistico Italiano, 1930. Rome, 1930. 617 pp.; maps, charts.*

Annual statistical volume of the Central Institute of Statistics of Italy. It includes statistics on employer and employee organizations and membership, collective agreements, social insurance, industrial accidents, unemployment, prices, and cost of living. The figures are, in general, for December 31, 1929, with figures for the preceding four or five years.

JAPAN.—Department of Education. *A general survey of education in Japan. Tokyo, 1930. 65 pp., illus.*

In March, 1928, there were 45,438 educational institutions in Japan with an enrollment of 12,044,194, or an average of 18 to every 100 persons in the population. Included in these institutions were 877 technical schools with 249,705 pupils and 15,361 technical continuation schools with an enrollment of 1,182,024.

LITHUANIA.—Bureau Central de Statistique. *Annuaire statistique de la Lithuanie, années 1927–1928. [Kaunas, 1930?] Various paging. In Lithuanian and French.*

Includes statistics on cooperative societies, emigration, and number of wage earners employed.

NORWAY.—Chefinspektøratet for Fabrikktilsynet. *Årsberetninger fra Arbeidsrådet og Fabrikktilsynet, 1929. Oslo, [1930?]. 86 pp.; charts.*

Contains a report on the activities of labor councils and on factory inspection in Norway during 1929, including legislation, organization and personnel, measures for prevention of accidents and industrial diseases, hours of labor for women and children, etc.

—— Statistiske Centralbyrå. *Statistisk årbok for Kongeriket Norge, 1930. Oslo, 1930. 272 pp.*

Contains statistical information in regard to Norway for 1930, including social insurance, cost of living, cooperative societies, unemployment, employment service, employers' and workers' organizations, housing, public welfare work, wages, hours, etc.

POLAND.—Chief Bureau of Statistics. *Concise statistical year-book of Poland. First year, 1930. Warsaw, 1930. 160 pp.; maps. (In English.)*

Contains statistical information for the Republic of Poland for 1930, including consumption, prices, employment and unemployment, wages, trade agreements, family budgets, strikes, social insurance, public health, trade-unions, etc.

POSEN (POLAND).—Statistical Office. *Statistical yearbook of the Province of Posen for the year 1928. Posen, 1930. 131 pp. (In Polish with French table of contents.)*

Includes information on migration, public health, public welfare work, social insurance, employment and unemployment, public employment service, strikes and lockouts, wages, etc.

PRUSSIA (GERMANY).—Statistisches Landesamt. *Statistisches Jahrbuch für den Freistaat Preussen. Berlin, 1930. 428 pp.*

The subjects covered in this statistical yearbook for Prussia include housing, labor relations, social insurance, public health, education, welfare work, etc.

STRAITS SETTLEMENTS.—Labor Department. *Annual report, for the year 1929. Singapore, 1930. 28 pp.*

Data on wages and labor conditions, taken from the report, are published in this issue of the Labor Review.

SWITZERLAND.—Caisse Nationale Suisse d'Assurance en Cas d'Accidents. *Rapport annuel et comptes pour l'exercice 1929. [Berne?] 1930. 54 pp.; charts.*

The annual report, for the year 1929, of the Swiss National Accident Insurance Fund.

UNION OF SOUTH AFRICA.—Office of Census and Statistics. *Official year book of the Union and of Basutoland, Bechuanaland Protectorate and Swaziland. No. 11.—1928–29. Pretoria, 1930. 1143 pp.; maps, diagrams, illus.*

The year book contains, in addition to the usual features, chapters on labor and industrial conditions and prices and price indexes. Of particular interest are the sections dealing with unemployment and relief works, apprenticeship, and miners' phthisis.

VICTORIA (AUSTRALIA).—Government Statist. *Fifty-second annual report on friendly societies, for the period of 12 months ended June 30, 1929. Melbourne, 1930. 32 pp.*

Data from this report are given in this issue.

Unofficial

ALISON, PAUL. *Le problème de la prévention des accidents du travail dans les entreprises. Nancy, Camille André, 1930. 366 pp.*

The author discusses the need for accident prevention, causes of accidents, safety measures, accident statistics, and the activities of the safety organizations of different countries.

ALLEN, EDITH LOUISE. *American housing. Peoria, Ill., Manual Arts Press, 1930. 216 pp., illus.*

A study of the historical development of houses in the United States, showing the effect of inventions, scientific discoveries, educational progress, financial conditions, political situations, immigration, and other factors in modifying the idea of what constitutes suitable housing. The purpose is to help in determining the features most desirable for certain conditions or types of family life, "so that, from the facts set forth, students of home economics and others will have a basis for further research, and for deciding what certain individuals need or can afford or attain in housing."

ALLGEMEINER DEUTSCHER GEWERKSCHAFTSBUND. *Jahrbuch, 1929. Berlin, 1930. 397 pp.; charts.*

The yearbook contains information in regard to the labor-union movement in Germany in 1929, including chapters on the economic and social developments in Germany, such as industrial and commercial policies, taxation, social insurance, labor legislation, employment and unemployment, education and vocational training, cost of living, hours of labor, wages, collective agreements, labor conferences, and other conditions and problems more or less pertaining to labor.

AMERICAN PUBLIC HEALTH ASSOCIATION. Committee on Lead Poisoning. *Lead poisoning. New York, 370 Seventh Ave., 1930. 37 pp.*

A report on standards in diagnosis, individual treatment, and industrial control of lead poisoning by a special committee appointed by the Industrial Hygiene Section of the Public Health Association. It is planned as a practical guide to the general practitioner, the industrial physician, the safety engineer, and workmen's compensation boards according to their respective fields. This is a progress report and the committee will consider and report at a later date upon such comments, suggestions, and criticisms as may arise.

ANTHONY, ARTHUR BRUCE. *Economic and social problems of the machine age. Los Angeles, University of Southern California Press, 1930. 79 pp. (University of Southern California studies, social science series, No. 3.)*

ARCHIV FÜR GEWERBEPATHOLOGIE UND GEWERBEHYGIENE. *Herausgegeben von Dr. L. Teleky und Prof. Dr. H. Zangger. Band 1, Heft 1 und 2. Berlin, Julius Springer, 1930. 302 pp., illus.*

This is the first issue of a new periodical dealing with industrial hygiene and diseases, which is to be published under the direction of Doctors Teleky and

Zangger with the collaboration of numerous specialists on the subject of industrial pathology in other countries. The articles will be printed in different languages.

BERTRAND, LOUIS. *La rémunération du travail en régimes capitaliste coopératif, socialiste. Brussels, L'Eglantine, 1930. 224 pp.*

A study by the Belgian Minister of State of the renumeration of labor under capitalist, cooperative, and socialist systems.

BINGHAM, W. V. Achievements of industrial psychology. (*Reprint from Mental Hygiene, New York City, Vol. XIV, No. 2, April, 1930, pp. 369–383.*)

CHAMBER OF COMMERCE OF THE UNITED STATES. Domestic Distribution Department. *Store opening and closing hours. Washington, 1930. 37 pp. (Mimeographed.)*

Reviewed in this issue.

COMMITTEE ON THE COSTS OF MEDICAL CARE. *The first three years' work of the committee and its plans for the future, by Ray Lyman Wilbur, M. D. Washington, 910 Seventeenth St. NW., 1930. 10 pp.*

An address by the chairman at the committee's spring meeting, 1930.

COPELAND, ROYAL S. *The National Institute of Health. Washington, Government Printing Office, 1930. 18 pp.*

Reviewed in this issue.

DESPREZ, JEAN. *Le délai-congé en législation comparée. Paris, Librairie Dalloz, 1929. 585 pp.*

A comparative study of legislation dealing with notice of dismissal in different countries, the second part of the volume dealing with a discussion of the various enactments on this subject in France. There is a short bibliography.

DOUGLAS, PAUL H., AND JENNISON, FLORENCE TYE. *The movement of money and real earnings in the United States, 1926–1928. Chicago, 1930. 57 pp.; charts. (Studies in business administration, Vol. I, No. 3, School of Commerce and Administration, University of Chicago.)*

EINHEITSVERBAND DER EISENBAHNER DEUTSCHLANDS. *Jahrbuch, 1929. Berlin, 1930. 190 pp.*

Contains information in regard to the Federation of Railway Workers in Germany for 1929, including chapters on wages, disputes, cost of living, agreements, social insurance, legal protection, education, etc.

ENNES, STANTON. *The Locomotive Engineers' investment in Florida real estate: Venice. Sarasota, Fla., The Sarasota Times, 1929. 135 pp.; map.*

An account of the experiences of the brotherhood with the development of the town of Venice, written by one who was "closely associated with their real estate development at Venice, Fla., from the fall of 1925 until the middle of 1927, and again as general manager from September 20, 1927, until March 31, 1928."

FISK, EUGENE LYMAN. *Possible extension of the human life cycle. 51 pp.; charts. (Reprinted from Vol. CXLV of The Annals of the American Academy of Political and Social Science, Philadelphia, September, 1929.)*

GREATER NEW YORK COMMITTEE ON HEALTH EXAMINATION. *The health examination. New York, 1930. [Various paging.]*

A report of the activities and an evaluation of the results of the campaign for health examination conducted by the committee in the latter part of 1929.

HATCHER, O. LATHAM. *Rural girls in the city for work. A study made for the Southern Woman's Educational Alliance. Richmond, Garrett & Massie (Inc.), 1930. 154 pp.*

A study of 255 girls in Durham, N. C., and Richmond, Va., the majority of whom had been in the city for from one year up to 10. "For as many of them, and as fully as possible, it tells what each left in the country, why she came, what she found, especially whether she found what she stated that she had come

to get, her present attitude toward having come, and what she recommends to girls who are still in the country and are considering the question of coming."

KLEBE, HEINRICH. *Die Gewerbeaufsicht in Bayern. Munchen, Theodor Ackermann, 1930. 116 pp., illus.*

Deals with factory inspection in Bavaria, including chapters on general history of factory inspection; organization of factory inspection in Bavaria; personnel; purposes of inspection, such as protection of industry; labor; trade agreements; women and young workers; home workers; etc.

LABOR YEARBOOK [BRITISH], 1930. *Issued by the General Council of the Trades-Union Congress and the national executive of the Labor Party. London, Labor Publications Department, 1930. 576 pp.*

This volume covers two years, no yearbook having been issued in 1929. In addition to the usual material, a section is devoted to rationalization, giving a sketch of the development of the movement in various countries, with an account of its progress in Great Britain, and outlining the measures proposed for protecting the interests of the consumer and the worker.

MCMILLEN, A. W. *Measurement in social work: A statistical problem in family and child welfare and allied fields. Chicago, University of Chicago Press, 1930. 154 pp.; charts. (University of Chicago social service monographs, No. 12.)*

METROPOLITAN LIFE INSURANCE CO. Policyholders Service Bureau. *Vacations for industrial workers. New York, [1930?]. 16 pp.*

MINE INSPECTORS' INSTITUTE OF AMERICA. *Proceedings, Columbus, Ohio, May, 1930. [Pittsburgh, 1930.] 124 pp.*

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *Employee stock purchase plans and the stock market crisis of 1929. New York, 247 Park Avenue, 1930. 37 pp.*

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS. *Publication 55: Conservation of vision in industry. (Reprinted from the Proceedings of the 1928 Conference.) New York, 370 Seventh Avenue. 64 pp.*

Contains several papers and discussions on conservation of vision in different industries and on lighting problems.

OLIVER, SIR THOMAS. *A report upon cokemen and by-product workers—their complaints and maladies. Durham, England, The National Union of Cokemen and By-product Workers, 1930. 8 pp.*

A running account of the processes in the manufacture of coke and the various by-products and of the hazards in the different processes.

PEARSE, ARNO S. *The cotton industry of India. Manchester, England, printed by Taylor Garnett Evans & Co. (Ltd.), 1930. 306 pp.*

The writer, who is the general secretary of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, made in 1929 an investigation of the cotton industry in China and Japan, which had considerable effect in rousing the English cotton textile manufacturers to a realization of the threat to Lancashire's supremacy involved in the growth of the industry in the East. The present volume contains the results of a similar survey of the industry in India, made in January and February, 1930. The report contains much of special importance to the cotton manufacturers, but intermixed are discussions of the character of the labor supply in India, the methods of handling workers, the need for educating and training them, the effectiveness of welfare work as a means to this end, and similar matters of more general interest. A comparison by items of the position and methods of the industry in India and Japan gives a striking picture of the differences between the two countries and of the lack of organization and efficiency which characterizes the Indian industry.

RUSSELL SAGE FOUNDATION. Department of Remedial Loans. *A credit union primer, by Arthur H. Ham and Leonard G. Robinson; revised by Rolf Nugent. New York, 1930. 149 pp.*

Contains, in catechism form, the essential principles of organization and operation of credit unions; the text of the New York credit union law; and an analysis of the various State credit union laws.

SOCIETY OF INDUSTRIAL ENGINEERS. *Trends in industry. Report of proceedings of sixteenth national convention, held at Cleveland, Ohio, October 23–25, 1929. Chicago, 205 West Wacker Drive [1930?]. 255 pp.; charts.*

Among the subjects treated were wage incentives, the age factor in industry, and effects of noise on industrial workers.

SURÁNYI-UNGER, THEO. *Recent developments in American economic policy. Budapest, 1930. 126 pp. (Publications of the Hungarian Statistical Society, No. 6. sz.)*

TRADES UNION CONGRESS AND LABOR PARTY. *Family allowances. London [1930]. 4 pp.*

Majority and minority reports of a special joint committee appointed by the general council of the Trades Union Congress and the national executive of the Labor Party. A digest of these reports was published in the September, 1930, issue of the Labor Review (pp. 90–91).

UNITED STATES BUILDING AND LOAN LEAGUE. *Secretary's annual report, submitted to the thirty-eighth annual meeting at Grand Rapids, Mich., July 29–31, 1930. Cincinnati, 1930. 101 pp.*

Summary data, taken from this report, showing the status of the building and loan associations in 1929, are given in this issue.

VERBAND DER MALER, LACKIERER, ANSTREICHER, TÜNCHER UND WEISSBINDER DEUTSCHLANDS. *Jahrbuch, 1929. Hamburg, 1930. 119 pp.*

Contains information in regard to the organization and activities of the German painters, lacquerers, house painters, decorators, and whitewashers unions in 1929, including a general review of economic and employment conditions in the painting trade, trade agreements, wages, hours, hazards, etc.

ZENTRALVERBAND DEUTSCHER KONSUMVEREINE. *Jahrbuch, 1930. Vol. 1. Hamburg, 1930. 648 pp.; charts.*

Yearbook of the Central Union of German Consumers' Societies giving data for 1929.